

## PRODUCT DATASHEET

## FTI-10 Single-Channel Signal Conditioner



The FTI-10 is a single-channel, battery-powered fiber optic signal conditioner especially designed to work with all of FISO's fiber optic sensors. It is a general-purpose instrument ideally suited to perform single-point measurements in a myriad of industrial and R&D applications.

The FTI-10 conditioner is designed to perform accurate single-channel measurements. Thanks to its unique, patented technology, the FTI-10 conditioner is capable of measuring the absolute cavity length of FISO's Fabry-Perot fiber optic sensors with astonishing accuracy, providing highly accurate and reliable measurements. The FTI-10 has a 0.01% full-scale resolution and a 0.025% full-scale precision.

The FTI-10 optical input channel is easily accessible through the unit's front panel. It comes standard with an RS-232 communication port and a  $\pm 10$  V adjustable analog output. Moreover, the unit's internal Flash ROM can be accessed to allow firmware upgrades and updates.

Data is stored in the internal memory buffer for later retrieval or sent directly to any analog input signal reading device through the  $\pm 10$  V adjustable analog output available on the back panel of the FTI-10 unit.

FISO's fiber optic temperature, pressure, strain, refractive index, and displacement sensors offer complete immunity to RF and microwave radiation with high temperature operating capability, intrinsic safety, and non-invasive use. A seven-digit gauge factor assigned to each sensor allows the FTI-10 conditioner to recognize automatically the sensor type and calibration, reducing test setup time.

The FTI-10 conditioner has a non-volatile memory buffer that can store up to 50 000 data points. Data logging sequences, duration, and other acquisition and data-management parameters are easily programmable using the front-panel interface, through RS-232 remote control commands or, even more easily, thanks to its accompanying software, FISOCOMMANDER.

The FTI-10 comes in a rugged 1/8 DIN casing designed to withstand heavy use and operation in industrial environments and has up to 8 hours of battery autonomy.

## Key Features

- Compatible with most of FISO's fiber optic sensors
- Voltage output and RS-232 communication port
- Backlighted LCD screen
- Small footprint
- Rugged and easy to use
- Battery powered
- 1/8 DIN enclosure

## Applications

- Microwave food processing
- Thermotherapy
- NMR applications
- Microwave and RF
- High temperature pressure measurements
- Multi-purpose laboratory applications
- Advanced composite materials
- Hazardous environments
- Aerospace applications

## Specifications

Number of channels	1
Sampling rate	10 Hz
Averaging	1 to 500 samples
Precision	0.025% of full scale
Resolution	0.01% of full scale
Dynamic range	15 000 : 1
Display	1 line 16 characters liquid crystal display with back-light
Data logging	50 000 data points
Analog output	±10 V with screw connectors <sup>1</sup>
Communication	RS-232
Upgradeability	Flash ROM firmware
Lamp life <sup>2</sup>	40 000 hours of continuous use
Weight	0.9 kg (2 lb)
Dimensions (W × D × H)	90 × 165 × 48 mm (1/8 DIN) (3.5 × 6.5 × 1.9 in)
Autonomy	8 hours with fully-charged battery (0.5 Watt power consumption)
Power requirements	12 Volts DC (wallmount adapter included)
Operating temperature	-20°C to 40°C (-4°F to 104°F)

1. 4-20 mA optional.
2. Lamp is replaceable.

## FTI-10 Dimensions

