

## product datasheet

## FTI-10 Signal Conditioner

**Key features**

- One channel
- Compatible with all of FISO's fiber-optic transducers
- Voltage output and RS-232 communication port
- 4-20 mA output option
- Backlighted LCD screen
- Small footprint (1/8 DIN)
- Rugged and easy to use
- Battery powered
- 1/8 DIN enclosure

**Applications**

- Microwave food processing
- Medical applications (thermotherapy, NMR)
- Other microwave and RF applications
- High temperature pressure measurements
- Multi-purpose laboratory applications
- Advanced composite materials
- Hazardous environments
- Aerospace applications

**THE FTI-10 IS A SINGLE-CHANNEL, BATTERY-POWERED FIBER-OPTIC SIGNAL CONDITIONER COMPATIBLE WITH ALL OF FISO'S FIBER OPTIC TRANSDUCERS.**

FISO's fiber-optic temperature, pressure, strain and displacement transducers feature complete immunity to microwave and RF radiation with high temperature operating capability, intrinsic safety, and non-invasive use. A 7-digit gage factor affixed on the connector of each transducer allows the FTI-10 conditioner to easily recognize the transducer type and calibration.

Through the use of a white-light cross-correlator (U.S. Patents 5,392,117 and 5,202,939), the FTI-10 conditioner is capable of measuring the absolute cavity length of FISO Technologies' Fabry-Perot fiber-optic transducers with astonishing accuracy, providing time-after-time consistency in the most adverse conditions. The FTI-10 has a 0.01% FS resolution (without averaging) and 0.025% FS precision.

The FTI-10 conditioner has a non-volatile memory buffer that can store up to 50 000 data samples. Data-logging sequences, duration and other operational parameters are easily programmable using the front panel interface or through RS-232 remote control. The FTI-10 comes standard with an RS-232 communication port and a  $\pm 10$  V adjustable analog output. A 4-20 mA output, relay output, and voltage inputs are available as options. The use of a Flash EEPROM allows the customer to easily upgrade the firmware.

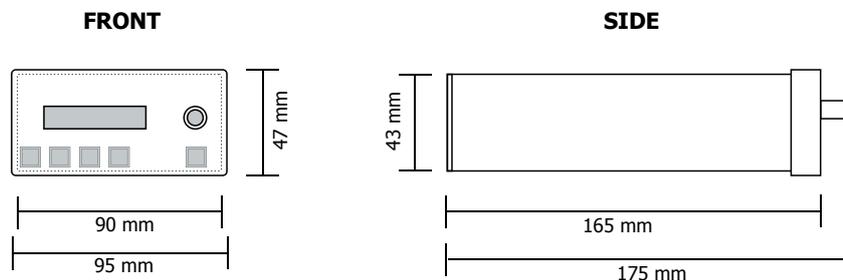
The FTI-10 comes in a rugged 1/8 DIN casing designed to withstand heavy use and operation in industrial environments and has up to 8 hours of battery autonomy.

# specifications



<b>Number of channels:</b>	One-channel
<b>Compatibility:</b>	Compatible with all of FISO's fiber-optic transducers (see transducers data sheets)
<b>Precision:</b>	0.025% of full scale
<b>Resolution:</b>	0.01% of full scale
<b>Dynamic range:</b>	15 000 : 1
<b>Sampling rate:</b>	10 Hz standard
<b>Averaging:</b>	1 to 500 samples
<b>Data logging:</b>	50 000 samples
<b>Operating mode:</b>	Direct (front panel) or through RS-232 (software included)
<b>Communication:</b>	RS-232
<b>Analog output:</b>	± 10 Volts standard with screw connectors (loop-powered 4-20 mA optional)
<b>Relay output (optional):</b>	100V (off) 130mA (on), 125V (off peak) 400mA (on peak)
<b>Analog inputs (optional):</b>	0 – 5 Volts (impedance 1 Meg)
<b>Autonomy:</b>	8 hours with fully-charged battery (0.5 Watt power consumption)
<b>Display:</b>	1 X 16 characters liquid crystal display with back-light
<b>Diagnostic:</b>	Yes
<b>Upgradability – firmware:</b>	Flash ROM Upgradable
<b>Upgradability – channels:</b>	No
<b>Light life expectancy:</b>	~ 40 000 hours of continuous use (MTBF)
<b>Weight:</b>	0.9 Kg
<b>Enclosure material:</b>	Aluminum casing and plastic front panel
<b>Enclose dimensions (WxDxH):</b>	9.0 X 16.5 X 4.8 cm (1/8 DIN)
<b>Power Requirements:</b>	10 to 14 Volts; AC/DC adapter included
<b>Operating temperature:</b>	-20 °C to 40 °C

## FTI-10 Dimensions



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