



HIGH ACCURACY  
TABLETOP MULTI-CHANNEL DATALOGGER  
PRESSURE, STRAIN, DISPLACEMENT & T°

The UMI is a tabletop, universal fiber optic datalogger ideally suited to performing multi-point temperature, pressure, strain and displacement measurements.

### Description

The **UMI** is a tabletop, universal fiber optic datalogger ideally suited to performing multi-point temperature, pressure, strain and displacement measurements in applications that are hostile to non-fiber optic transducers.

Roctest'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. The **UMI** is designed to perform accurate multi-channel measurements. The system can scan through all the channels in use with a switching time of 0.15s, or sample one specific channel at a rate of 20 Hz. A 7-digit gauge factor affixed on the connector of each transducer allows the UMI 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 **UMI** datalogger is capable of measuring with astonishing accuracy the absolute cavity length of Fabry-Perot fiber optic transducers, providing highly accurate and reliable measurements. The **UMI** has a 0.01% F.S. resolution (without averaging) and 0.025% F.S. precision.

The **UMI** datalogger has a non-volatile memory buffer that can store up to 50 000 data samples. Datalogging sequences, duration and other operational parameters are easily programmable using the front panel interface or through the RS-232 communication port. Each channel has a dedicated  $\pm 5$  V adjustable analog output. The use of a flash EEPROM allows for easy firmware upgrade.

### Key Features

- 4 or 8 channels
- Rugged and easy to use
- Large vacuum fluorescent display
- Voltage output and RS-232 communication ports
- Up to 20 Hz sampling rate

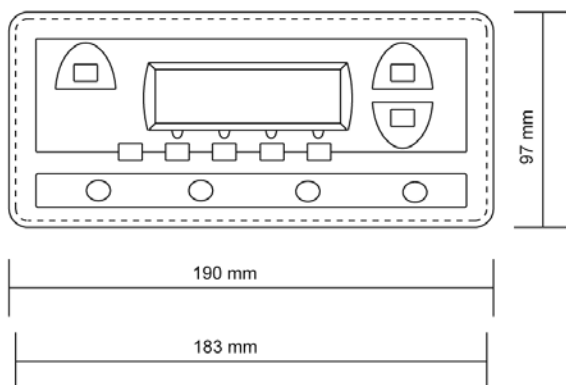
### Applications

- Civil engineering applications
- Laboratory applications
- Microwave and RF related applications
- New material research

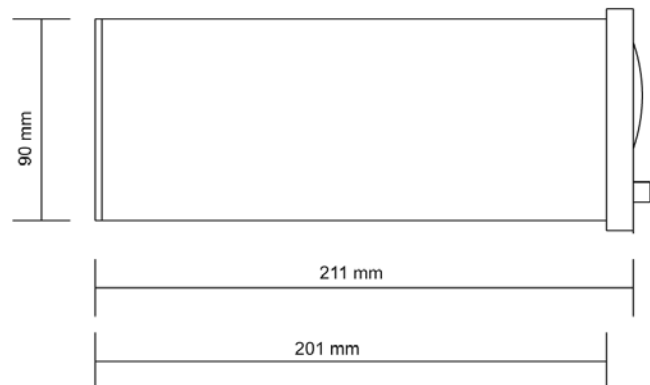
### Specifications

Dynamic range	15 000:1
Precision	0.025% of F.S.
Resolution	0.01% of F.S.
Number of channels	4 or 8
Sampling rate	20 Hz (one specific channel)
Switching time	150 ms (in scan mode: time to switch between two channels)
Averaging	1 to 500 samples
Display	4 lines of 20 characters, vacuum fluorescent display
Operating mode	Direct (front panel) or through RS-232 (I/Software included)
Datalogging	50 000 samples; programmable datalogger
Analog output	±5 volts (span and offset software adjustable)
Communication	RS-232 and USB 1.1
Diagnostic	Yes
Upgradeability – firmware	Flash ROM upgradeable
Upgradeability – channels	No
Light life expectancy	~40 000 hours of continuous use (MTBF)
Enclosure material	Aluminum and PVC
Power requirements	10 to 14 volts (5 watts); AC/DC adapter included
Operating temperature	-20 to +40°C
Enclosure dimensions	190 mm × 211 mm × 97 mm (w × d × h) (1/2 DIN)
Weight	2 kg

FRONT (4-CHANNEL)



SIDE



### Ordering Information

Please specify:

- Come as a complete unit
- Transducers must be ordered separately