



COMPACT SINGLE CHANNEL READOUT  
PRESSURE, STRAIN, DISPLACEMENT & T°  
RUGGED & EASY TO USE

The FOR-1 is a single-channel, battery-powered fiber Optic readout able to measure pressure, temperature, strain and displacement sensors with great accuracy

### Description

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 gauge factor affixed on the connector of each transducer allows the **FOR-1** readout 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 **FOR-1** is capable of measuring with astonishing accuracy the absolute cavity length of Fabry-Perot fiber optic transducers, providing time-after-time consistency in the most adverse conditions. The **FOR-1** has a 0.01% F.S. resolution (without averaging) and 0.025% F.S. precision.

The **FOR-1** readout 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. The **FOR-1** comes standard with an RS-232 communication port and a  $\pm 10$  V adjustable analog output.

The use of a flash EEPROM allows for easy firmware upgrade.

The **FOR-1** 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 life.

### Key Features

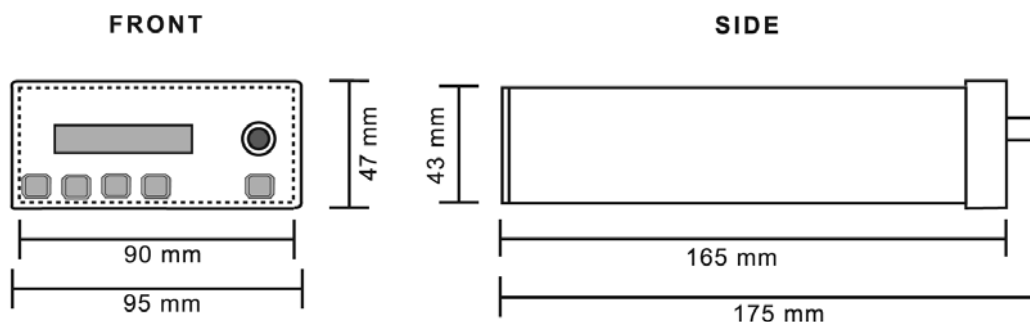
- Single channel
- Backlit LCD screen
- Rugged and easy to use
- Voltage output and RS-232 communication ports
- Small footprint (1/8 DIN)

### 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	One
Sampling rate	10 Hz standard (other rates available)
Averaging	1 to 500 samples
Datalogging	50 000 samples
Operating mode	Direct (front panel) or through RS-232 (software included)
Communication	RS-232
Analog output	±10 volts standard with screw connectors
Relay output (optional)	100 V (off) 130 mA (on), 125 V (off peak) 400 mA (on peak)
Analog input (optional)	0–5 volts (impedance 1 MΩ)
Autonomy	8 hours with fully-charged battery (0.5 watt power consumption)
Display	1 × 16 characters LCD with backlight
Diagnostic	Yes
Upgradeability – firmware	Flash ROM upgradeable
Upgradeability – channels	No
Power requirements	10 to 14 volts; AC/DC adapter included
Light life expectancy	~40 000 hours of continuous use (MTBF)
Enclosure material	Aluminum and plastic
Operating temperature	–20 to +40°C
Enclosure dimensions	9.0 × 16.5 × 4.8 cm (width × depth × height) (1/8 DIN)
Weight	0.9 kg



### Ordering Information

Please specify:

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