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# FIBER OPTIC SINGLE-CHANNEL PORTABLE READOUT

Model FOR-1

## APPLICATIONS

The FOR-1 is a single-channel, battery-powered fiber optic readout compatible with fiber optic transducers.

## 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.

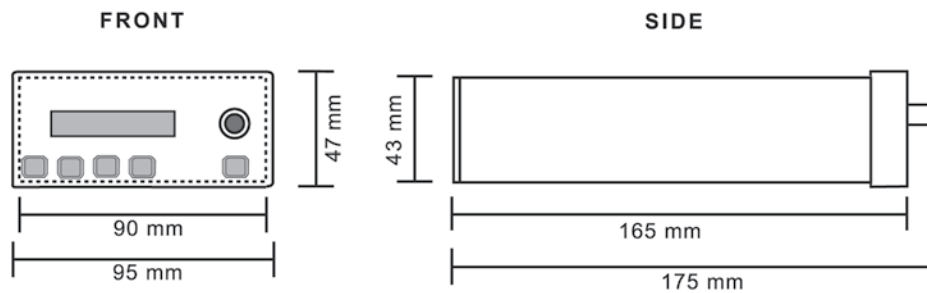


## FEATURES

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

## 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



FOR-1 Dimensions