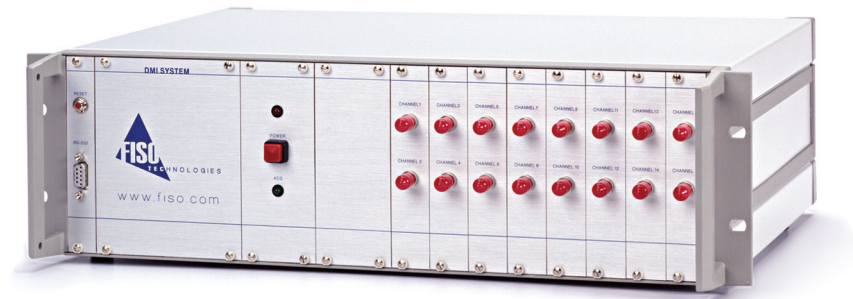


PRODUCT DATASHEET

DMI Signal Conditioner



The DMI is a multi-channel, universal fiber optic signal conditioner especially designed for applications that require continuous monitoring of a large number of measuring points. Designed to work with all of FISO's fiber optic sensors, it is a general-purpose instrument ideally suited to perform multi-point temperature, pressure, strain, displacement, and force and load measurements in a myriad of industrial and R&D applications in hostile environments.

The DMI conditioner is designed to perform accurate multi-channel temperature, pressure, strain, and displacement measurements. Thanks to its unique, patented technology, the DMI 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 DMI has a 0.01% full-scale resolution and a 0.025% full-scale precision.

FISO's fiber optic sensors offer complete immunity to RF and microwave radiation with high temperature operating capability, intrinsic safety, and non-invasive use. The sensors are also designed to withstand harsh and corrosive environments.

The DMI comes in a 16-channel or in a 32-channel version. All optical input channels are easily accessible through the unit's front panel. The system scans all the channels in use sequentially with a switching time of 0.15 seconds. It can also read on a discrete channel at a 20 Hz sampling rate. Data is stored in the internal memory buffer for later retrieval.

The DMI 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 remote control commands or, even more easily, thanks to its accompanying software, FISOC Commander. Moreover, a Flash ROM allows firmware upgrades.

The DMI signal conditioner comes standard in a 19-inch rackmount that accommodates from 16 or 32 channels. A NEMA-4 DMI version is optionally available.

Key Features

- 16 to 32 channels
- 50 000 samples datalogger
- Programmable datalogger
- NEMA-4 enclosure
- Compatible with most of FISO's fiber optic sensors

Applications

- Multi-points continuous monitoring
- Civil engineering
- High voltage and RF fields
- In-situ process monitoring
- Hazardous environments

Specifications

Number of channels	16 or 32
Sampling rate	20 Hz
Switching time	150 ms
Averaging	1 to 500 samples
Precision	0.025% of full scale
Resolution	0.01% of full scale
Dynamic range	15 000 : 1
Data logging	50 000 data points
Analog outputs	±5 V software adjustable in scale and offset
Communication	RS-232
Upgradeability	Flash ROM firmware
Lamp life ¹	40 000 hours of continuous use
Weight	4.8 kg (10.6 lb)
Dimensions (W × D × H)	448.8 × 326 × 132.5 mm (17.7 × 12.8 × 5.2 in)
Power requirements	10 to 20 Volts (5 Watts)
Operating temperature	−20°C to 40°C (−4°F to 104°F)

1. Lamp is replaceable.

DMI Dimensions

