

MICRO PRESSURE MEASUREMENT SYSTEM

- MPMS200 Micro Pressure System
- TSD280 - MPMS Sensor, 5 cm 2 m
- TSD281 - MPMS MRI Sensor, 5 cm 2 m
- TSD282 - MPMS Sensor, 15 cm 2 m
- TSD283 - MPMS MRI Sensor, 15 cm 2 m
- MPMS200 - EXT MPMS MRI Sensor Extension, 8 m

The MPMS200 is a single-channel, hand-held fiber optic micro pressure measurement system for physiological pressure monitoring: intra vascular blood pressure; Urodynamic; Intra cranial pressure; Intra uterine pressure; Intra ocular; Cardiac assist applications; etc.

- Use with TSD280 Series sensors—tip diameter 0.30 mm (1 French)
- Compact and rugged design
- High resolution and precision
- Easily interfaces with BIOPAC or 3rd-party DAQs
- **MR Safe** sensors available
- Automatic atmospheric pressure correction



The amplifier unit provides an analog output signal in the ± 5 V range and has a 250 Hz frequency range. The system includes a CBL101 cable to interface directly with the UIM100C for Research Systems. (CBL122 also included for MP160 Systems with AMI100D or HLT100C). The unit includes a mains power transformer.

MPMS200 Physical Connections

1. Connect the CBL101 cable (included) between the MPMS200 and the UIM100C, AMI100D, or HLT100C module.
2. Launch *AcqKnowledge* and select Set Up Data Acquisition from the Hardware menu.
3. Add a new channel, select UIM100C (*AcqKnowledge* 4.x with MP150) or AMI100D/HLT100C (*AcqKnowledge* 5 with MP160), and choose the MPMS200 option from the transducer list.

AcqKnowledge will automatically calibrate the signal to mmHg and display the correct units when recording data. See the Opsens LifeSens Manual for further information about the amplifier and sensor.

Specifications

Number of channels:	One
Compatibility:	TSD280 Series fiber optic pressure sensors (other sensors upon request)
Full scale*:	-50 mmHg to 300 mmHg relative to atm. (wider range also available)
Resolution*:	0.5 mmHg (no averaging)
Precision*:	1% FS or 1 mmHg (whichever is greater)
Sampling rate:	250 Hz standard
Connector compatibility:	SC connector (SCPROM connector compatible)
Internal manometer:	Included for automatic atmospheric pressure correction
Analog Output:	± 5 V (1 V/100 mmHg)
Input power and consumption:	9 to 24 VDC - 1.8 W (wall-transformer adapter included)
Dimensions - (without rubber boot protection):	45 mm (H) x 105 mm (W) x 165 mm (L)
Display:	large LCD
Storage temperature:	-40° C to 70° C
Operating temperature:	0° C to 45° C
Humidity:	95% non-condensing
Light source life span:	40000 hours MTBF

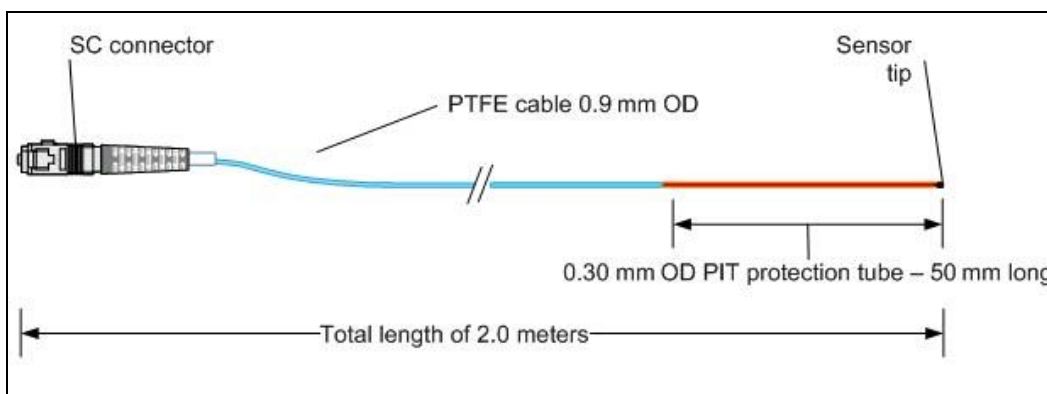
* Specifications include the effect of both the signal conditioner errors and the sensor errors.

The Micro Pressure Measurement System utilizes Opsens technology and benefits from Opsens' White Light Polarization Interferometry (WLPI) technology (Patent# 7,259,862).

TSD280 Series Micro Pressure Sensors for MPMS200 System

The MPMS200 system is used with TSD280 series fiber optic sensors that have an optional extension cable for MRI applications. The probes are suitable for work on small animals (up to the frequency response 250 Hz limit; contact BIOPAC for higher frequency response options).

- TSD280 - MPMS Sensor 5 cm 2 m
- TSD281 - MPMS MRI Sensor 5 cm 2 m
- TSD282 - MPMS Sensor 15 cm 2 m
- TSD283 - MPMS MRI Sensor 15 cm 2 cm



The TSD280 and TSD282 are micro pressure sensors that connect directly to the MPMS200 unit.

MRI Use: The TSD281 and TSD283 are **MR Safe** to 9.6T without any artifact because there is no metallic part in the sensor (see Specifications below for components).

TSD280 Series Specifications

	TSD280	TSD281	TSD282	TSD283
Sensor tip diameter:	0.30 mm OD (1.0 French)			
Sensor tip material:	PIT 3 tube			
Sensor tip material length:	50 mm	50 mm	150 mm	150 mm
Connector:	SC connector	F2.5 ferrule connector	SC connector	F2.5 ferrule connector
Cable length:	2.0 meter			
Cable sheath:	PTFE			
Operating range:	Operating range: P1 (-50 mmHg to +300 mmHg (relative to atmospheric pressure))			

MPMS200 EXT - MPMS MRI Sensor Extension 8 M

This **MR Safe** extension cable can be used to connect the MPMS200 Micro Pressure Measurement unit in the MRI control room to a TSD281 or TSD283 micro pressure sensor in the MRI chamber room.

- Cable: 3 mm OD Kevlar reinforced PVC optical cable
- Fiber core: 62.5 µm core
- Cable length: 8.0 meters
- Sensor end connector: F2.5 to TSD281 or TSD283
- System end connector: SC to MPMS200