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MICRO PRESSURE MEASUREMENT

System	MPMS200A Micro Pressure System
Sensors	TSD280A – MPMS200A Sensor, 5 cm 2 m
	TSD280 – MPMS Sensor, 5 cm 2 m
	TSD281 – MPMS MRI Sensor, 5 cm 2 m
	TSD282A – MPMS200A Sensor, 15 cm 2 m
	TSD282 – MPMS Sensor, 15 cm 2 m
	TSD283 – MPMS MRI Sensor, 15 cm 2 m
Cables	MPMS200A-ADAPT – Sensor Adapter
	MPMS200A-EXT – MPMS MRI Sensor Extension, 8 m

The MPMS200A is a compact and portable signal conditioner to be used with BIOPAC's interferometric fiber optic sensors for pressure measurements: 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
- Portable battery-operated unit
- Large convenient touchscreen display
- Ethernet & USB interface

The amplifier unit provides an analog output signal in the ±5 V range and has a 250 Hz frequency range. The unit includes a mains power transformer.

MPMS200A Connections

1. To connect to MP200/160/150/100 systems, add CBLEPM (3.5 mm – 2 x tinned wire), CBL100 (3.5 mm – 3.5 mm), and either CBL122 (unisolated RJ11 to 3.5 mm jack) or INISOA signal isolator (purchased separately). For MP36A/36/35 systems add SS70LA to CBL102 and CBLEPM (purchased separately).
2. To connect to MP150/100 system, add CBLEPM (3.5 mm mono phone jack to 2x tinned wire) and CBL100 to connect directly to UIM100C. Isolation protection necessary if system will also be used for human electrophysiology with wired amplifiers (100D or 100C series). For isolation, CBL100 should connect to INISOA and HLT100C- MP150 is required. MP160 systems included either HLT100C or AMI100D, so CBLEPM/CBL100 would need either CBL122 (unisolated RJ to 3.5 mm mono phone jack) or INISOA signal isolator (purchased separately). For MP36A/36/35 systems add ss70LA to CBL102 and CBLEPM (purchased separately).
3. Launch Acq*Knowledge* and select Set Up Data Acquisition from the Hardware menu.
4. Add a new channel, select UIM100C (Acq*Knowledge* 4.x with MP150) or AMI100D/HLT100C (Acq*Knowledge* 5 with MP160), and choose the MPMS200 option from the transducer list.

Acq*Knowledge* will convert the signal from volts to mmHg and display the correct units when recording data. See the OpSens HandySens-M Manual for further information about the amplifier and sensor. Users can modify the device's analog output scaling in Acq*Knowledge*. Click here for instructions on how to calibrate Acq*Knowledge*.

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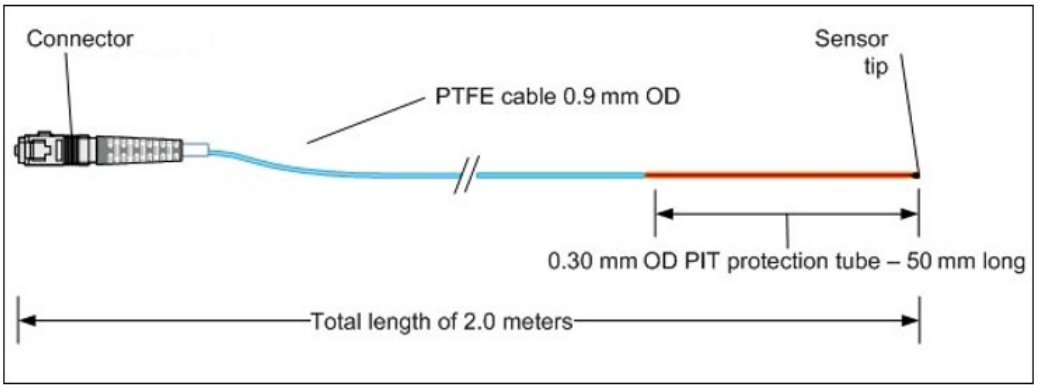
TSD280 Series Micro Pressure Sensors

The MPMS200A 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).

- TSD280A - MPMS Sensor 5 cm 2 m
- TSD280 – MPMS Sensor, 5 cm 2 m
- TSD281 - MPMS MRI Sensor 5 cm 2 m
- TSD282A - MPMS Sensor 15 cm 2 m
- TSD282 – MPMS Sensor, 15 cm 2 m
- TSD283 - MPMS MRI Sensor 15 cm 2 m



The TSD280A and TSD282A are micro pressure sensors that connect directly to the MPMS200A 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).

MPMS200A-ADAPT – Sensor Adapter

This sensor adapter is required for the MPMS200A System module to accept older TS280 or TSD282 pressure probes.

Note: Pressure probes with "A" suffix—TSD280A and TSD182A—are directly compatible with the MPMS200A System module without an adapter, but they are not compatible with the older MPMS200 System. Labs that have both MPMS200A and MPMS200 need the adapter to use TSD280 and TSD182 with the newer system.

MPMS200A EXT - MPMS MRI Sensor Extension 8 M

This **MR Safe** extension cable can be used to connect the MPMS200A 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: LC/APC to MPMS200A

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MPMS200A Specifications

Number of channels:	One
Compatibility:	TSD280 Series fiber optic pressure sensors (other sensors upon request)
Sampling rate:	User defined 2Hz to 250 Hz
Connector compatibility:	LC/APC connector
Internal manometer:	Included for automatic atmospheric pressure correction
Internal storage:	32 gigabytes
Analog Output:	0-5 V, ±5 V, 0-10 V, 0-20mA, 4-20 mA
Input voltage and frequency:	24V to 32 V (AC/DC wall-transformer adapter included)
Consumption:	Max power 36W (during battery charging)
Battery:	Rechargeable battery with an autonomy of 8 hours
Dimensions & Weight:	55.8 mm (H) x 199.4 mm (W) x 214.1 mm (L) – 0.68 Kg
Display:	5.0” color (800×480) capacitive touchscreen
Storage temperature:	-40° C to 70° C
Operating temperature:	0° C to 50° C
Humidity:	95% non-condensing

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

TSD280 Series Specifications

	TSD280A	**TSD281**	**TSD282A**	**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:	LC/APC connector	F2.5 ferrule connector	LC/APC 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)			