

MODEL 110

OPTICALLY PUMPED ROCK MAGNETOMETER

FEATURES

- Highly sensitive $<1\text{pT}$ per root Hz noise
- Fast measurement times:
- Compact design
- Magnetic shielding
- Room temperature operation
- Automatic sample handler

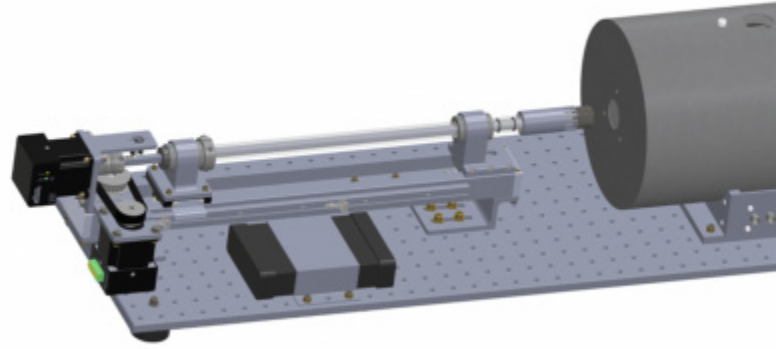
APPLICATIONS

- Paleomagnetic Research

The Applied Physics Systems Model 110 Optically Pumped Rock Magnetometer System (OPRM) is a revolutionary breakthrough for Paleomagnetic research. This low cost, non-superconducting system rivals the performance and accuracy of traditional SQUID based superconducting rock magnetometer systems, enabling entirely new areas of research.

The Model 110 is highly sensitive, less than 1pT per root Hz noise. Magnetic shielding provides high permeability 4 layer shield and attenuation level of 10^5 . Internal field nulling coils and derivative gradient coils for uniform field.

The Model 110 can take measurements in minutes because it operates at room temperature and requires no cryogenic cooling system to operate. In addition it provides improved throughput due to system and sensor size and fully automatic robotic sample handler for translation and rotation of samples.



The compact design, just over 1m long by 0.3m wide, and low weight allow the Model 110 to fit on a desktop or to be moved or mobilized as required. The automatic sample handler is easy to use and custom sample holders can be easily designed and fabricated to enable the measurement of non-standard or irregular samples. The system includes the magnetometer, software, and all the required cabling and accessories and is simple enough to use that measurements can be taken within an hour of unpacking. The user-friendly software is 'Plug and Play' for easy setup and use.



**APPLIED PHYSICS
RESEARCH**

HEADQUARTERS
425 Clyde Avenue Mountain View, CA 94043

OFFICE 650.965.0500
EMAIL service@appliedphysics.com

PERFORMANCE

Low Magnetic Noise Level	5 x 10 ⁻¹⁰ AM2 5 x 10 ⁻⁷ emu
High Dynamic Range	5 x 10 ⁻¹⁰ AM2 to 1 x 10 ⁵ AM2 5 x 10 ⁻⁷ emu to 1 x 10 ² emu
Field Attenuation	10 ⁵
Measurement Time	Approx 45-90 seconds

ENVIRONMENTAL

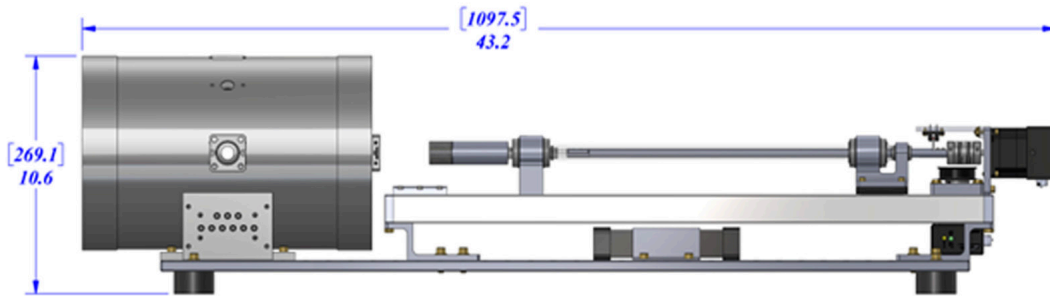
Operating Temperature (ambient)	10°C to +35°C 50°F to +100°F
---------------------------------	---------------------------------

ELECTRICAL

Power Requirements	Single Phase 110V/220V AC
Computer Requirements	Windows 10 or Higher
Operating Modes	Single and Dual Measurement Modes

PHYSICAL

Length	43.2" (109.75 mm)
Width	12" (30.5 mm)
Height	10.6" (26.9 mm)
Weight	66 lb (30 kg)
Magnetic Shielding	High Permeability Multi Layer MuMetal
Sample Handler	Single Sample Automatic
Sample Holder	Standard and User Customizable Sizes Available



SYSTEMS DIMENSIONS TOP/SIDE VIEW

