

— MPD Series —

# Four Channel High-Voltage Polarizer



High measurement accuracy



High Safety



Multiple polarization modes



Integrated Design



Overseas website: [www.matmeas.com](http://www.matmeas.com)

Chinese website: [www.balab.com.cn](http://www.balab.com.cn)

# Product Presentation:

The MPD Series Four-Channel High-Voltage Polarization system is designed for oil-bath polarization of piezoelectric ceramic samples, allowing simultaneous polarization of up to four samples. Developed specifically for laboratory research on piezoelectric ceramic process preparation, this system enables users to optimize and master the polarization process through continuous experimentation and refinement, ensuring the best preparation performance of piezoelectric ceramics.

This equipment is widely used in various advanced technology fields, including **aerospace, laser gyroscopes, adaptive optics, precision machinery, automatic control systems, semiconductor integration, and biomedical engineering.**



# Functional Characteristics:

- 01 Utilized isolation shielding technology and safety interlock functions to prevent misoperation and ensure the safety of the human eye.
- 02 Each channel has an independent high voltage output with breakdown current protection, each channels operate independently without interference.
- 03 Support multiple polarization modes for different sample types, accommodating various polarization requirements.
- 04 When the sample is broken down, the system will give an alarm and stop the voltage output to prevent instrument damage.
- 05 It has three modes: offer ramp-up polarization mode, step voltage polarization mode, step voltage pulse polarization mode.
- 06 It has intelligent detection function to make the polarization process more safe.
- 07 The system automatically issues an alarm and prevents voltage output if the interlock device is not properly engaged before starting the test.
- 08 It has visual monitoring function, which can view the polarization process, polarization parameters and polarization state in real time.
- 09 Each channel is equipped with voltage/current monitoring, protection, cut-off functionality and alarm notification.
- 10 Each channel has independent breakdown protection, breakdown indication, and breakdown current notification.

# Parameter specification

Polarization mode: Oil bath;	Temperature control accuracy: $\pm 3^{\circ}\text{C}$
Polarization voltage: 0-10 kV/0-20 kV/0-30 kV	Temperature control options: PID precision control.
Polarized current: 1 mA per channel maximum	Temperature rise rate: $3^{\circ}\text{C}/\text{min}$ , $6^{\circ}\text{C}/\text{min}$ , $9^{\circ}\text{C}/\text{min}$
Voltage output accuracy: $\pm 5\%$	Insulating materials: 99 alumina ceramic and polytetrafluoroethylene
Minimum detection current: above 100 nA	Sample size: $d \leq 10 \text{ mm}$ , $\phi \leq 50 \text{ mm}$
Temperature range: RT- $200^{\circ}\text{C}$	Power supply: 220V/50Hz~60Hz, power: 900W;

Standard configuration: Host, measuring fixture, measurement software, power cord, factory inspection report, standard sample kit, and manual