

Features:

- Low profile half rack size for multi-channel applications
- Full complement of interchangeable probes
- Selectable recorder output range
- LED meter with “black out” for dark room applications



High performance at a modest size and price

Designed for maximum performance at a moderate price, the Model 279 ISOPROBE® Electrostatic Voltmeter is now part of Monroe Electronics' line of quality instruments for measuring electrostatic surface potential without physical contact. Manufactured with the same care and attention that have made Monroe ISOPROBE® Electrostatic Voltmeters the industry standard. The Model 279 offers full function performance, humidity tolerance and high reliability for a wide range of industrial applications in minimum space.

Uses 1034 Series Probes:

Monroe Electronics Type 1034E (end-viewing) or 1034S (side-viewing) (probes are 0.35" [9mm] x 0.35" [9mm] x 2.85" [72.5mm] in length. Add 0.8" [20mm] length for cable at minimum bend radius.) Contains 1kHz tuning fork chopping driver and onboard hybrid microcircuit preamp. Useable from -50°C to +80°C. Optional probe configurations are available for high or low resolution and transparent probes for light decay measurements. Length of probe cable is 10 ft. (3.0 meters). Provision has been made for air or inert gas purging of probe. Rear mounted connector on instrument is standard; front panel connector is optional. Unit is calibrated independent of probe and includes certificate of NIST traceability. Interchangeable Model 1034 probe (type specified by customer) is sold separately. See Model 1034 data sheet for more details and options.

The latest technology from the first name in non-contact measurement

Model 279 takes advantage of Monroe's years of experience in design of reliable instruments for NON-CONTACTING measurement of electrostatic potential combined with modern semiconductor technology. A full spectrum of proven-design interchangeable probes exposes broad new areas for exploratory research as well as providing a precision instrument for routine applications in electrostatic measurements. Some typical and potential applications include:

- Electrophotographic and Xerographic Measurements
- IC Manufacturing and Handling
- Radiation effects on insulators and semiconductors
- Electret Research
- Static Electrification, Electric Field Studies
- Process Monitoring and Control

Isoprobe® Electrostatic Voltmeter model 279

Specifications:

Range:	±3000 volts, auto polarity	
Accuracy:*	0.1%, ±0.003%/°C over +20 to +40°C range (at recorder output) Useable to +50°C	
Speed of Response:*		
For typ. input step:	<3ms	(10% to 90%)
for 1kV step:	<2½ms	(10% to 90%)
for 2kV step:	<3½ms	(10% to 90%)
for 3kV step:	<4ms	(10% to 90%)
Settling time:	<3½ms to 1% of 1kV step input	
Frequency response:	Small signal frequency response typical ±3db to >300Hz	
Drift:*	<0.01V/hr after 1 hr warm-up (0.003V/hr typical). Not measurably affected by 10°C temperature variation or changes between 10% and 90% relative humidity.	
Noise:*	<0.3V rms or 2 volts peak-to-peak wide band (bandwidth restricted to <1kHz) referred to input.	
Surface resolution:	Determined by probe aperture size and surface-probe separation. Standard type 1034E & S probes with 0.07" (1.75mm) aperture will resolve a 0.10" (2.5mm) spot at 0.02" (0.5mm) separation.	
Recorder output:	Compressed analog output is input divided by 100, 200, or 1000 (factory selectable). Typical maximum dynamic range at isolated BNC connector is > ±18 volts for external loads >10kΩ	
Output filter:	Bessel low pass filter with 0.7ms constant delay	
Probe:	Uses Model 1034 series probes	
Power requirement:	100, 115, 230 VAC, ±10%, 50/60Hz, 15 watts	
Size:	1.7x8.2x15.1" (44x208x384mm), 1.75" rack mounting available (1 or 2 per rack)	
Weight:	4lb. (1.8kg)	
Accessories:	Manual, probe hole vent plug, line cord, optional 220V fuses	
CE Compliance	Pending	

Calibration:

Monroe Electronics instruments are factory-calibrated prior to shipment. Recalibration should be performed annually, or more frequently if specified by contract or company policy. Your instrument should also be recalibrated any time it has been repaired or tampered with. We will be happy to perform the calibration for you or refer you to one of our Authorized Service Organizations.

Warranty:

Monroe Electronics, Inc., warrants that each instrument and sub-assembly manufactured by them shall be free from defects in material and workmanship for a period of one year after shipment from the factory. This warranty is applicable to the original purchaser only.

*Dependent on specific probe model, probe-surface separation and environment. Specifications shown are for standard Type 1034E or S probes in a normal laboratory atmosphere. Separation for accuracy and response speed tests is 1/8" (3mm) and for noise and drift tests, 0.13mm (0.005"). Performance generally improves in controlled environments and may be degraded under exceptional dirty or dusty conditions or in ambience of unstable gaseous constituents.

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The Monroe Electrostatic & ESD product line is now owned by Advanced Energy and managed by TREK in Lockport, NY.