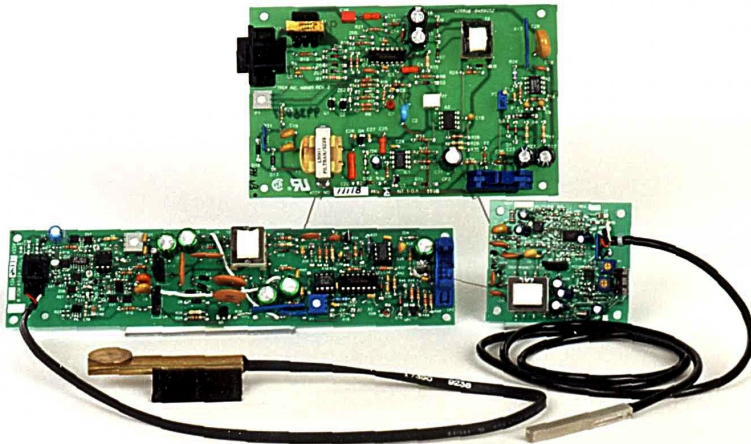


# On-Board Controllers

## High Speed, Low Cost OBCs for ESVM Applications



Since 1983, TREK, INC. has shipped more than half-a-million sets of on-board electrostatic sensors to copier and laser printer manufacturers around the world. The reputation for quality and reliability from Trek on-board controllers (OBC) has been highly respected for more than 25 years. Trek noncontacting electrostatic voltmeters (OBC) are designed to provide accurate, drift-free, high-speed, low noise measurements of electrostatic potentials in a low cost unit for OEM electrophotography applications.

The Trek OBC accomplishes voltage measurements without physical contact with the surface of the drum. The field-nulling technique for noncontacting voltage measurement maintains DC stability and high accuracy in the presence of probe-to-surface variations. This technique assures no loading of the voltage on the surface of the drum and permits accurate measurements on the drum surface when the drum is in motion.

This permits measurements on rotating drums without the need to establish a fixed spacing to maintain accuracy.

The patented design of the Trek OBC guarantees a high gain and a high signal-to-noise ratio for an accurate, fast speed of response, with superior noise and drift performance. The Trek patented low-impedance technology assures stable operation over a wide range of temperature and humidity conditions.

Trek OBCs can make noncontacting, surface-potential measurements in the range between 0 to  $\pm 1.2$  kV DC or peak AC and feature a durable, miniature probe.

The probe design provides low noise and drift performance even in the presence of contaminating particulates and under conditions of high humidity and temperature. A precision voltage divider provides a low-voltage replica of the measured electrostatic potential. The low-profile, PC board design makes them ideal for making on-board voltage measurements in copiers and laser printers.

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Measurement and Power Solutions™



- TREK, INC., famous for its Electrostatic Voltmeters, is a world class manufacturer of custom ON-BOARD CONTROLLERS (OBC) for electrostatic monitors.
- Measurement ranges to  $\pm 1.2$  kV DC or peak AC
- Speed of response to less than 5 ms for a 1 kV step change
- DC accuracies to better than  $\pm 1\%$  of full scale
- Customer specified voltage monitor output ratios
- Customer specified probe-to-surface separations
- Customer specified PC board size
- Customized probe mounting fixtures
- Spatial resolutions less than 8 mm
- Excellent stability