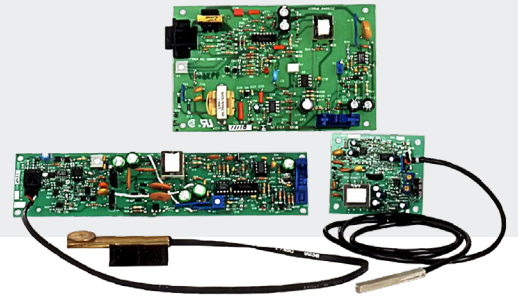


TREK ESVM ON-BOARD CONTROLLERS (OBC)

Custom on-board controllers (OBC) for electrostatic voltmeter (ESVM) applications.



Trek[®] non-contacting on-board electrometers, commonly referred to as on-board controllers provide accurate, drift-free, highspeed, low-noise measurements of electrostatic potentials in a low cost unit for OEM electrophotography applications. These OBCs have an operating mean time until failure rating of greater than 16,000 hours and been installed in the products of leading electrophotographic copier and printer manufacturers around the world.

The Trek OBC employs a patented technique to perform the non-contacting measurement of the electrostatic voltage level of the photoconductor surface associated with electrophotographic processes. The non-contacting technique allows high stability voltage measurement to be made while the photoconductor surface is moving. High measurement accuracy is maintained even if the OBC measurement probe to photoconductor surface distance varies due to mechanical run-outs. The non-contacting method also insures that no charge transfer to the probe occurs which would cause disruption of the surface voltage.

PRODUCT HIGHLIGHTS

- Customer specified voltage monitor output ratios
- Customer specified probe-to-surface separations
- Customer specified PC board size
- Customized probe mounting fixtures

AT A GLANCE

Measurement Range

To ± 1.2 kVDC or peak AC

Speed of Response

To less than 5 ms for a 1 kV step change

DC Accuracy

To better than $\pm 1\%$ of full scale

Spatial Resolutions

Less than 8 mm

PATENTED DESIGN

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.

The Trek OBC accomplishes voltage measurements without physical contact with the surface of the drum. The field-nulling technique for non-contacting 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.

PROBES

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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PRECISION | POWER | PERFORMANCE

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