

An electrodynamic sensor for electrostatic charge measurement

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Abstract- Electrodynamic sensors are used in the process industry because they are low cost and robust. Though frequently used very little fundamental work on them has been reported. This paper describes an investigation into characteristics of hemispherically and rectangularly shaped sensors. Two parameters are investigated, the effect of sensor area on sensitivity and the spatial filtering effect of the sensor due to its finite size. Models are proposed and results obtained using them compared with experimental values.