

Electrometers with built-in automatic leakage compensation, ALC, are typically not suitable for IMRT measurements.

Automatic leakage compensation, ALC, is used by some electrometers to avoid excessive leakage current. Electrometers with this feature are typically not suitable for IMRT measurements. Reset error problems and other associated malfunctions that are being reported during IMRT measurements are actually being caused by the ALC.

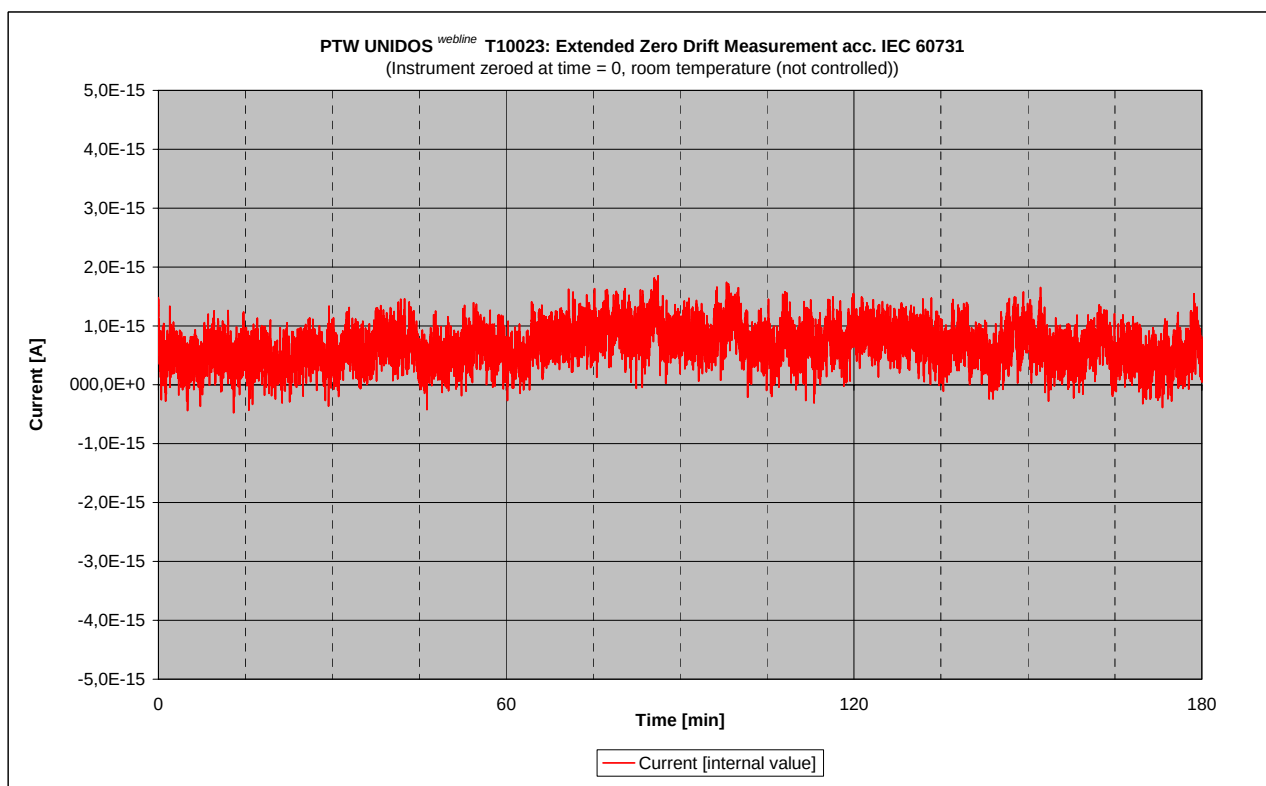
When ALC is activated, the electrometer detects the end of the measurement, makes a leakage measurement, and then dynamically compensates for leakage by subtracting this value from the measured value.

This simply does not work for IMRT measurements because radiation from a segment can fall into a time interval during which the electrometer is measuring leakage causing the electrometer to malfunction. Hence, for IMRT measurements the ALC must be deactivated. This, however, results in a leakage current that "gets out of control".

Our UNIDOS^{webline}, UNIDOS, and UNIDOSE electrometers do not have this problem.

Leakage compensation is performed by the user pushing the NUL/ZERO button on the front panel of the electrometer prior to the first measurement.

Due to the outstanding stability of our UNIDOS electrometers, there is no need to repeat the zeroing during a measurement or use an ALC.



Zero drift of a UNIDOS^{webline} over 3 hours at room temperature. Even after hours the zero drift does not change.