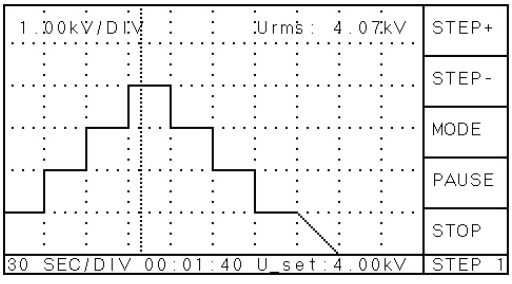
STEP*compact*

Increasing the high voltage stepwise is a task that is often required during type testing and production testing of high voltage products. The STEP*compact* is an instrument to automate such step tests. The unit combines the control function with the measurement capabilities of a high voltage meter. As a stand-alone instrument, the STEP*compact* can be easily moved between different high voltage test sets.

The STEP*compact* measures the voltage signal derived from a capacitive or resistive divider. Using a fiber optic transmission, the UP and DOWN relay contacts of the voltage regulator are actuated to adjust the high voltage according to the programmed test sequence.

Features

Similar to the HV*compact*, the instrument calculates and displays the characteristics of the captured high voltage signal such as Û, Û/Ö2, U_{rms}, frequency, and the crest factor. The unit accepts a nominal input voltage of 100 V_{rms}. In order to correctly acquire even excessively distorted high voltage signals, the STEP*compact* samples up to 200 V peak signals.



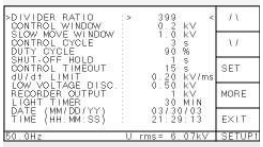
Running step test sequence

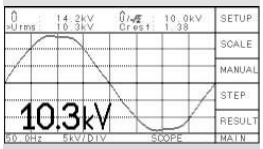
Using the five menu-driven control buttons, up to 35 different test sequences can be programmed and stored in a non-volatile memory. A test sequence

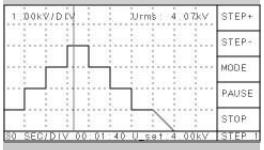
Safety and automation for step test sequences

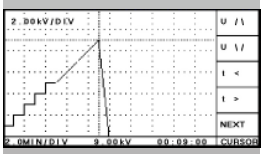
consists of steps and ramps in any order. Besides the automatic mode, a manual mode can be used to set a specific voltage and keep it over time. In factory environments with strongly varying load situations, this function can be very helpful to maintain a stable high voltage level with long-term tests.
Up to seven configurations can be stored in the non-volatile memory in order to adapt the instrument to the properties of different high voltage test sets. Besides the divider ratio, a configuration setup contains settings such as the control cycle or the control window to tune the instrument to the properties of the high voltage test set.

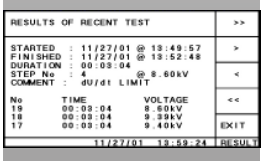
STEP*compact* - Step Voltage Controller

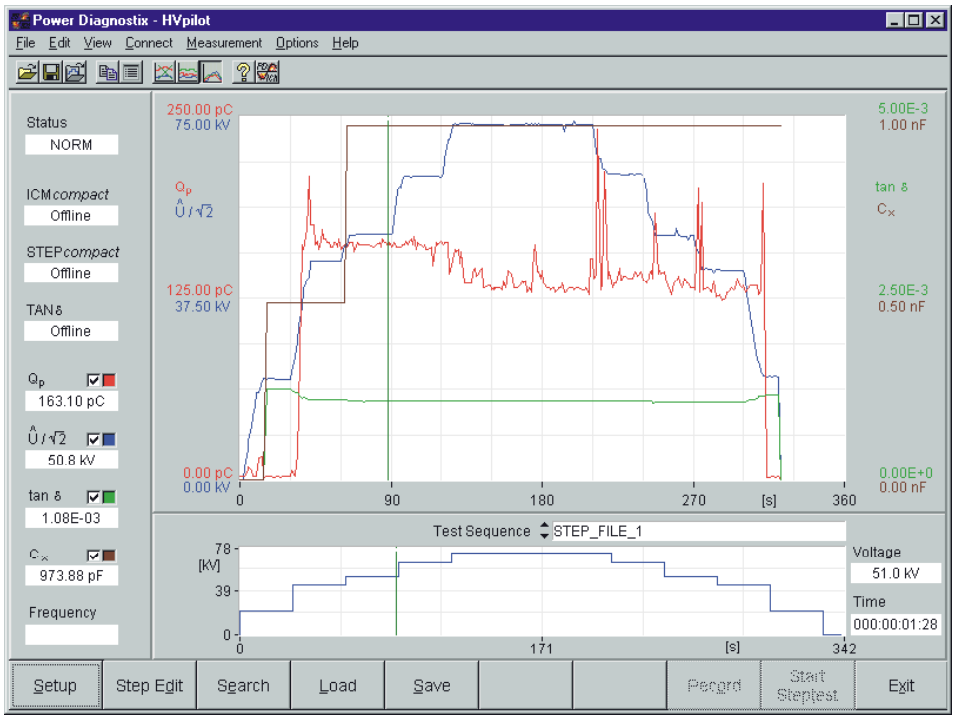












HV*pilot software*

In the standard configuration, the STEP*compact* comes with a self-contained relay box that is remotely controlled via a fiber optic cable. Alternatively, a direct connection to the HV*control*, Power Diagnostix standard control unit for high voltage test sets, can be provided.
To ensure a safe unattended processing of a step test, the STEP*compact* offers several safety features. Incipient breakdown is detected by monitoring the change of the voltage (dU/dt). Further, timeout limits can be set. The instrument keeps a record of the recent test to validate its successful completion or to indicate the point of breakdown or cancellation.

HV*pilot* Software

The HVpilot software allows the complete supervision of a high voltage test sequence. Using a serial interface, the software connects to the STEPcompact for the voltage control and measurement. Further, the HVpilot software offers convenient programming and editing of the test sequences. Additionally, this software can connect to the ICMcompact to read the partial discharge level and to the TDAcompact to read the tanδ, as well as the capacitance of the device under test. An export function allows to save the acquired data in file formats for MS Excel and MS Word.

Offering complete measurement of high voltage signals plus flexible programming of step test sequences makes the STEP*compact* an ideal and cost-effective solution to automate high voltage test sets. The optional software HV*pilot* offers convenient programming and reporting.