

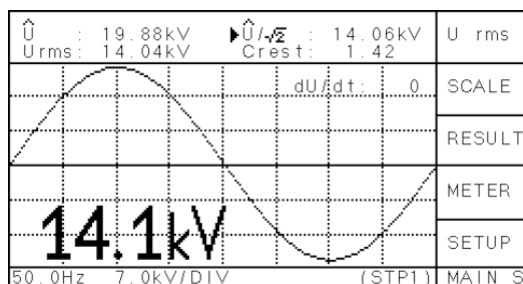
HVcompact High voltage measurement system



- Auto-ranging high voltage oscilloscope
- Instant display of all crucial values in one screen
- Adjustable voltage limit to avoid overloading of the device under test
- Detection of an incipient breakdown or flashover
- Simple analysis of defects thanks to the storage of the voltage history in a non-volatile memory
- Adjustable divider ratio to adapt the instrument to your specific test voltage
- Relay outputs for the connection to an external test set control

DESCRIPTION

The HVcompact is a digital high voltage meter with an auto-ranging oscilloscope and a meter display for the measured voltage values. In contrast to conventional, analogue measuring devices, the HVcompact also displays derived and additional measurement values, such as $\hat{U}$, $\hat{U}/\sqrt{2}$, U RMS, crest factor, and measurement frequency, in addition to the measured high voltage (U DC). Either U DC, $\hat{U}$, $\hat{U}/\sqrt{2}$, or U RMS can be displayed using large characters to improve the readability.



The HVcompact is a good choice for laboratory use and material testing (quality assurance) of:

- Instrument, current, and voltage transformers
- High voltage and medium voltage cables
- Switchgears

With a maximum input voltage of ~100 V RMS and an adjustable divider ratio, the HVcompact can easily be matched to your specific test setup.

Further, the unit offers the monitoring of a voltage limit and the indication of a voltage breakdown. The analysis of a breakdown is simplified, as the voltage history of the last minutes before such an event is stored in a non-volatile memory.

The HVcompact is equipped with a USB serial interface on the front for the connection of the instrument to a PC with software that monitors the voltage along with partial discharge readings, for instance.

The rear panel of the HVcompact shows the connections for the power supply, the voltage input (BNC), the earthing wing nut, the relay connector, the recorder output (BNC), the COM (TTL) connector, and optionally a LAN and/or RS-232 link.



SAFETY FEATURES

In order to avoid that a test specimen is stressed above its allowable voltage, the instrument setup allows to define a voltage limit for the measurement. In case the test voltage exceeds this limit, the HVcompact can trip an external relay, which can, i.e., block the 'UP' button of the control circuit or disconnect the main circuit breaker.

Additionally, the instrument can predict an incipient breakdown or a flashover by detecting even very small voltage drops in advance of such a failure. Therefore, a maximum permissible voltage change per second (dU/dt) can be set. If this value is exceeded the instrument automatically stops the test to protect the specimen from being damaged.

HVcompact

High voltage measurement system

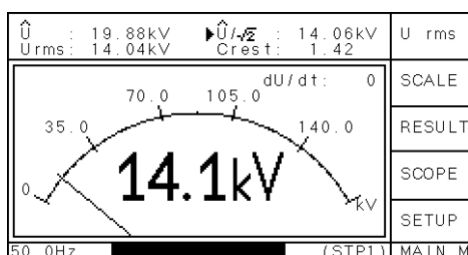
YOUR BENEFITS

Giving an instant display of all relevant parameters of a high voltage signal, including an oscilloscope trace, makes the HVcompact an ideal extension for high voltage test rooms.

- Cost-effective modernisation or upgrade of your high voltage test sets
- Addition of helpful functions to your test setup
- Simplified defect analysis

KEY FEATURES AND OPTIONS

- Two display modes: Needle meter and oscilloscope
- Safety features to detect incipient breakdowns and flashovers
- Relay output for signal transfer to external test controls
- Recorder output for voltage signals from 0 to 10 V
- Calibrated in our DAkkS-accredited laboratory which is certified according to ISO 17025:2018
- Two housing versions: Rack-mountable 19-inch housing or half 19-inch desktop housing for tabletop operation
- Optional LAN interface
- Optional connector for a fibre optic serial link (RS-232 interface)
- Optional automation software HVpilot



TECHNICAL DATA

Mains supply:	100–240 V AC, 50–60 Hz (automatic)
Line fuse:	2.0 A (time-lag)
Power requirements:	Max. 35 W
Display:	Backlit LCD
Display resolution:	128 x 240 pixels b/w
Operation:	5 menu supported buttons
Input:	100 V RMS or $\pm 200 V_{\text{peak}}$
Input impedance:	5 M Ω 200 pF
Frequency range:	20–300 Hz (> ver. 1.03) 20–510 Hz (> ver. 1.14)
Precision:	< 0.5 % + 0.5 V
A/D converter:	± 11 bits
Samples:	197 samples per cycle, e.g., 20 ms at 50 Hz $\rightarrow$ 100 μ s per sample
Recorder output:	0–10 V with $R_0 = 100 \Omega$ (BNC connector)
Voltage limit (U_{max}):	One single-pole, double-throw contact max. ~ 250 V, 5 A
Breakdown (dU/dt):	One single-pole, double-throw contact max. ~ 250 V, 5 A
Operation temperature:	10–40 °C (non-condensing)
Overall size: (W x H x D)	236 x 133 x 300 mm ³ (exclusive connectors)
Weight:	Approx. 3.5 kg

ORDERING INFORMATION

Product	Order no.	Options	Order no.
HVcompact, half 19-inch desktop housing	PX50000	LAN interface	PX50001
HVcompact, 19-inch rack mountable housing	PX50000-01	RS-232 interface	PX50002
Cable set for HVcompact	PX17043	Remote control computer system	PX90000
Software	Order no.	Set of measuring cables is NOT included with the instrument and must be ordered separately.	
Software HVpilot	PX19007		

SALES OFFICE

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HVcompact_DS_e1.01

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ISO 9001, ISO 14001,
ISO 17025, ISO 4501

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