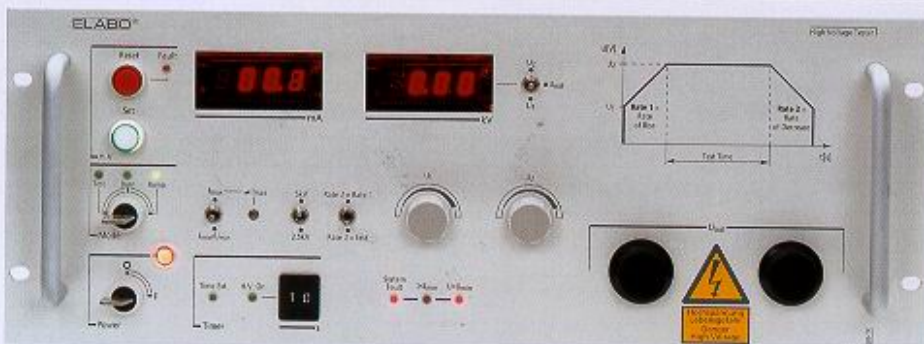


High-voltage Tester with programmable Ramp-Mode

Product Group

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2GA27 90-1K

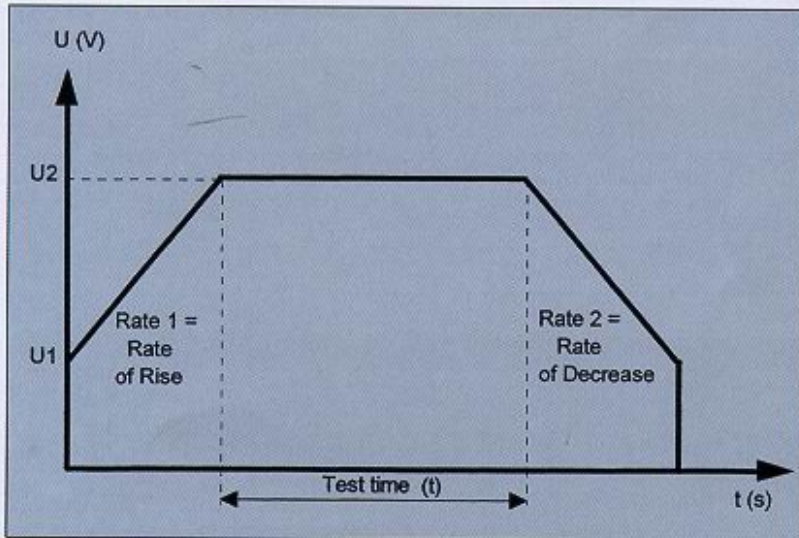
This unit is intended for the insulation testing and voltage proof testing of electrical equipment, machines, components and insulating materials which, according to the relevant safety regulations, must be tested with a sinusoidal AC voltage.

Due to the programmable test voltage, also via interface (0 to 10 V/DC), it can be part of an automatic testing system..

The ramp mode allows for the following tests:

- for various testing regulations for which a defined rate of rise of the testing voltage is applicable
- for test items with high inherent capacitance
- for electronic equipment for which a non-destructive testing is only guaranteed by increasing the test voltage slowly.

The high-voltage tester enables a voltage profile to be preset in accordance with the following function.



- U2 = Test voltage
- U1 = Test voltage applied immediately at the start of the test
- t = Test time (1 ... 99 s)
- Ramp 1 = Rate of rise with two programmable speeds
 - 1: max. rise (appr. 1.5 kV/s)
 - 2: adjustable in the range of appr. 0.5-1.5 kV/s
- Ramp 2 = Rate of decrease = maximum speed rate

- Microprocessor controlled
- Steplessly adjustable Test and ramp voltage 0 to 5 kV AC (via frontpanel, analog interface 0 to 10 V/DC or optional RS 232/ IEEE interface)
- Ramp-up mode with two selectable speed rates
- Rated power 500 VA
- Short circuit current > 200 mA
- Steplessly setting of tripping current 0 to 100 mA
- Internal timer 1 to 99 s or continuous running
- Basic current and minimum voltage monitoring
- Burn, Test and Ramp-Mode selectable by key switch
- Input for external safety contact
- Floating relay outputs for fault alarms
- Two digital display instruments for current and voltage
- Designed to VDE 0104/DIN 57104
- Interface for external control via analog or digital signals
- 19"/4 HU module

OPTIONAL:

- RS 232/IEEE 488 interface

Technical data:

Output voltage:	0 ... 5 kV rms
Tripping current:	0 - 100 mA
Rated power:	500 VA
Response:	< 50 ms
Test time setting range:	1 ... 99 s or contin. running
Rate of rise:	0.5 ... 1.5 kV/s
Measurement fault:	2% evaluation 0.3% Measuring instrument
Working temperatur.:	10 °C ... 50 °C
Mains supply:	230 V +10 % -5%, 49 ... 61 Hz
Dimensions:	19" / 4 HU module to (DIN 41494) Depth 360 mm

Connection for safety circuit

The following functions are controllable via the interface:

Digital:

- High-voltage ON
(for RAMP mode setting rate of rise only at front panel)
- High-voltage OFF,
respectively Reset after fault alarm
- Interrogation overcurrent release
- Interrogation system fault

Analog:

- Presetting of test voltage for TEST mode:
0 ... 10 V/DC corresp. to 0 ... 5 kV
- Voltage reading:
0 ... 10 V/DC corresp. to 0 ... 5 kV
- Current reading:
0 ... 10 V/DC corresp. to 0 ... 100 mA

RS 232/IEEE 488 (OPTION)
all above mentioned signals

Apart from the ramp mode there is also a direct control mode possible. Thus, the test voltage can be controlled within automated test systems by the control computer.

For stand-alone-mode the following modes can be selected by a key switch:

RAMP

Start voltage and test voltage can be preset and are displayed via the built-in digital voltmeter. On starting, voltage ramp-up begins from the adjusted start voltage to the preset test voltage. On reaching this voltage, the test time starts. After lapse of test time, voltage ramp-down is initiated. This is effected with the maximum speed rate. When the adjusted start voltage is reached, the test sequence is completed.

The tripping current is activated during the complete test.

TEST

If selected, always the preset test voltage U2 will be switched on (without ramp-up mode). During test time the voltage can be adjusted via a potentiometer. Test time can be set at the test timer. For test time 00 continuous time is selected. Tripping current is activated.

BURN

This mode is used for pinpointing a fault in the item on test, it is only selectable for stand-alone mode. The maximum short-circuit which flows at burnouts is appr. 150 mA. The overcurrent release is inhibited in this mode and the unit is protected by a thermal switch against overload.

Mode selection via key switch at the front panel only. (BURN mode cannot be started via the interface.)

The overcurrent release is preselected between 1 mA and 100 mA. If the set value is exceeded, the unit disconnects the high-voltage with 50 ms and gives an audible and acustical fault alarm, as well as a digital signal. Further tests are only possible after a fault acknowledgement.

For the monitoring of complete test systems it is possible to set inside the test unit min. voltage and min. current, which will be controlled automatically during the test runs.

ORDERING DATA

High-voltage tester module 0 ... 5 kV AC with programmable ramp mode 19" / 4 HU	2GA27 90-1K
Optional feature combined RS 232/IEEE 488 interface	2GA27 90-7Wz
ACCESSORIES	
19" MODULE HOUSING 4 HU, D = 390 mm	2GA27 93-1B
1 pair safety test probes	2GA27 94-2A
Warning lamp set with connection lead and plug	2GA27 94-2C
Footswitch with connection lead and plug	2GA27 94-2D
High-voltage test cabinet	2GA27 94-3A
Two-Hand-control	2GA27 94-2L