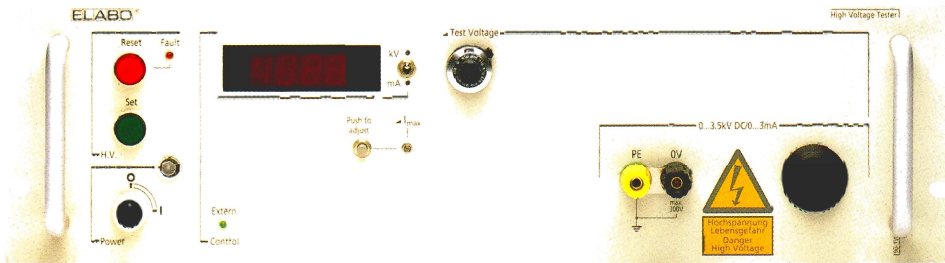


High-voltage Tester

Product Group

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2GA27 90-1W

The 90-1W/V/Y tester family serves for insulation and dielectric strength testing on electrical components, component assemblies and devices, where testing with alternating or direct current with high residual ripple can result in damage or destruction.

Since the output voltage is current-limited, the safety measures according to VDE 0104, sub-clause 1.2-b, e.g. provision of safeguarding devices at test benches, warning indicator lights, use of devices for protection against electric shock and other necessary protective provisions are not explicitly required. This makes the unit particularly suitable for intermediate tests in the manufacture of complex devices. For fault evaluation, a tripping current can be preselected over the entire measuring range. On exceeding the set limit, the high-voltage is disconnected with generation of a visual and audible fault indication. The reset button must be pressed before a new test can be started.

To also enable testing of items with high inherent capacitance, the unit features an evaluation delay function which is infinitely adjustable in 3 ranges. After applying high-voltage, the capacitors are charged with a maximum current up to the preselected voltage value. "PASS/FAULT" detection is initially activated after lapse of the delay time. Discharge of the measuring circuit is ensured by short-circuiting the voltage output with the test voltage disconnected.

A ten-turn potentiometer enables exact adjustment of the output voltage. For indication of current and voltage, as well as the adjusted tripping current, a switchable digital display is installed.

The high-voltage tester with the standard digital-analogue interface or optional V24 (RS 232) and IEEE 488 interface, is ideal for use in automatic test systems.

DIGITAL-ANALOGUE INTERFACE (D-A-S)

The D-A-S is preferably used for automation tasks with stored-program controllers. The activation of start, reset, external control and fault type interrogation takes place with 24 V DC or floating contacts.

ANALOGUE OUTPUTS

For measured value registration and further processing, analogue DC signals (0–10 V) can be tapped as a function of the test voltage and current.

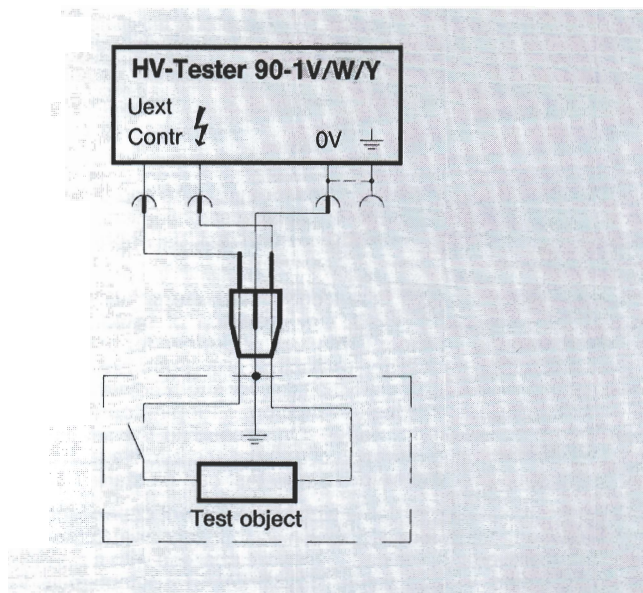
ANALOGUE INPUTS

Adjustment of the high-voltage and tripping current can take place with analogue DC voltage signals (0–10 V).

- With 3 mA current limitation
- Electronically regulated DC test voltage
- Infinitely adjustable test voltage
- Short-circuit current < 12 mA
- Minimum residual ripple
- Test voltage earthed
- Adjustable tripping delay
- Minimum voltage monitoring
- D-A-S interface
- Optional with RS 232 and IEEE 488 interface

CONTACT AND SYSTEM MONITORING IN TEST SYSTEMS

The unit features a minimum voltage monitoring circuit as standard. With this separate measuring system, the high-voltage tapped from the test item can be measured and compared with the adjusted minimum voltage limiting value.



Basic arrangement of a contact monitoring circuit with voltage feedback

TECHNICAL DATA	90-1W	90-1V	90-1Y
Test voltage [DC]:	0–3.5 kV	0–6 kV	0–12 kV
Residual ripple [vrms]:	< 0.01 %	< 0.01 %	< 0.01 %
Deviation [vrms]:	< 0.1 %	< 0.1 %	< 0.1 %
max. output current:	3 mA	2 mA	1 mA
Current measuring range:	0...3.00 mA	0...1.999 mA	0...1.000 mA
Tripping delay:		10 ms to 10 s	
Operating temperature:		10–50° C	
System voltage:		230 V +/- 10 %, 49 ... 61 Hz	
Dimensions:		19"/3 HU, slide-in module acc. DIN 1494, depth 360 mm	

ORDERING DATA

High-voltage test slide-in module 19"/3 HU 0–6 kV DC max. 2 mA	2GA27 90-1V
High-voltage test slide-in module 19"/3 HU 0–3.5 kV DC max. 3 mA	2GA27 90-1W
High-voltage test slide-in module 19"/3 HU 0–12 kV DC max. 1 mA	2GA27 90-1Y

ACCESSORIES

19" slide-in module housing 3 HU, 390 mm deep	2GA27 93-1A
1 safety test probe 6 m long HV cable	2GA27 94-2AZ 06
Optional IEEE 488 and RS 232 C interface	2GA27 90-7WZ
Optional multi-coupler for one analog in or output	2GA27 90-1X