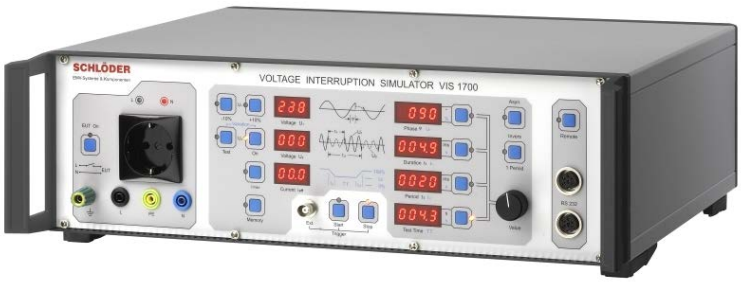
Voltage interruption simulator

VIS 1700_1



- **AC-Test: IEC / EN 61000-4-11**
- **DC-Test: IEC / EN 61000-4-29**
- **Inrush current measurement**
  at any phase position 0° - 360 °
- **Automatic AC + DC ramp function**
  (fig.2), second voltage source not necessary

Introduction

The clearly adjustable simulator VIS 1700 can simulate the voltage dips and voltage variations that can be found on supply nets (AC and DC). Different modes of operation are possible:

Short interruptions 100%: The supply network of the EUT can be interrupted in any phase position for a defined time (0,1 ms – 9980 ms).

Voltage dips: The switching between the rated voltage U1 and the variable voltage U2 (U2 always <= U1) is always erratic. It can be set at each phase angle of the mains begin or end. The standard test is defined at 40%, 70% and 80%. This test requires the injection of the same phase voltage U2 at the rear of the device. A step transformer (VIS 740) fulfilled the standard requirement. **Fig. 1**

Voltage fluctuation: Fluctuation to an adjustable voltage (0 95 % of U1). The parameters for release time (0,1 – 70 sec.), test time (0,01 – 70 sec.) and recovery time (0,1 – 70 sec.) can be set individually. This is not an additional supply voltage required. **Fig. 2**

Inrush current: For each EUT up to max. 16 A rated current (AC) can be measured the inrush current on any phase position (0 – 360°).

For oscilloscope analysis there are three BNC jacks on the back side of the unit to examine the parameters voltage, current and trigger.

Standard requirements

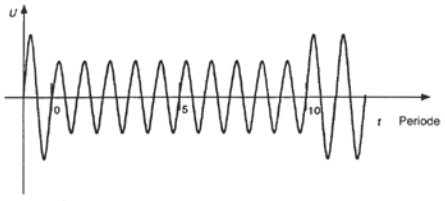


Fig.1: Voltage dips

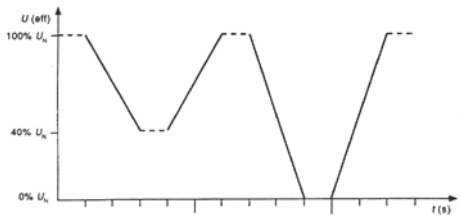


Fig.2: Voltage fluctuation

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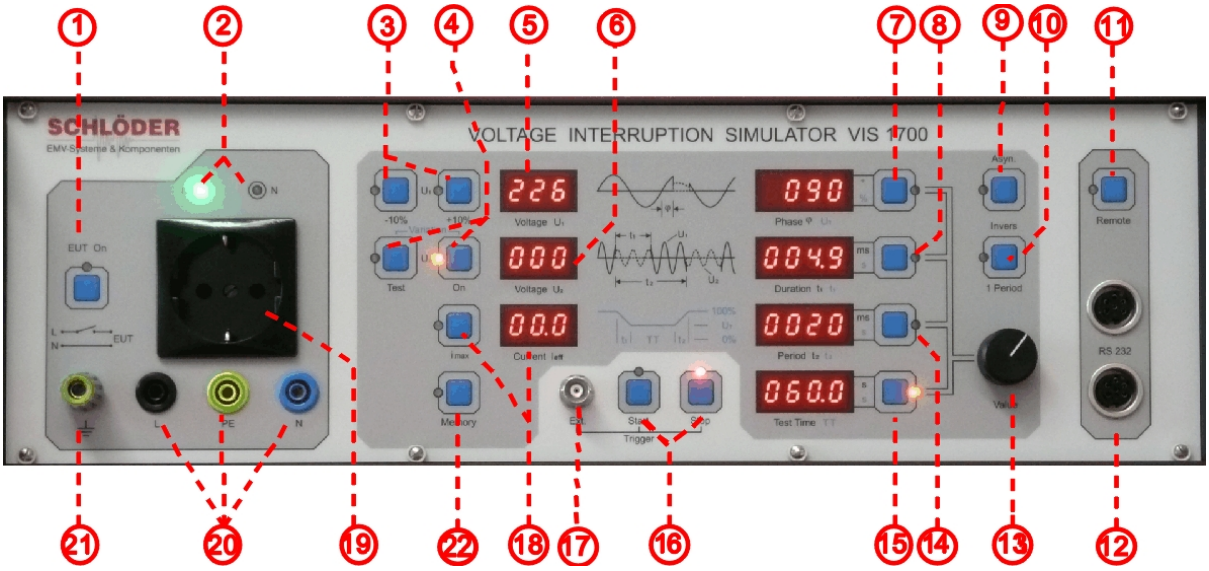

Technical data

EUT supply

- ♦ Nominal voltage — AC max. 280 V / DC max. 360 V
- ♦ Nominal current
  Voltage dips (fig. 1)
  AC — max. 16 A,
  DC — max. 8 A
  Voltage fluctuation (fig. 2)
  AC — max. 16 A
  DC — max. 4 A
- ♦ Phase indication — [2] lamp red / green

Functions:

[9] Interruptions / voltage variations - synchronous and asynchronous
[3] Supply voltage $U_1 = U_N$: reversing to +10% U_N and -10% U_N
[5] Display supply voltage U_1
[4] Variable voltage U_2 test and U2 on, activation of the >automatic ramp function< (fig. 2)
[6] Display variable voltage U_2
[1] EUT on / off
[18] Starting inrush current I_{max} / rated current measurement
[10] Inverse operation within one period
[11] Switch for remote control release
[12] RS 232-interface
[13] Adjustment for phase angle [7], duration [8], period [14] and test time [15] with digital potentiometer
[22] MEMORY key

Functions:

[7] Phase angle	0 - 359°, step 1°
[8] Duration t_1	0,1ms - 9980ms
[14] Period t_2	Asynchronous 5,0ms - 9990ms Synchronous 20ms - 9980ms
[15] Test time	0,1sec - 9990sec, furthermore single event and continuous operation
[16] Trigger	Start- and Stop-key
[17] Trigger external	BNC connector
[19] EUT connection	Protection earth outlet
[20]	Additional lab. jacks
[21] Ground connection	Ground jack at the front side and back side
♦ Measurement	BNC outputs (on rear) for voltage, current and scope triggering
♦ EUT supply "U_1"	On rear
♦ EUT supply "U_2"	On rear (e.g.variac)
♦ EUT Fail	Trigger-input, on rear

Common

♦ Operation temp.	0 - 40 °C
♦ Dimensions	19″ housing, 3 HE
♦ Weight	13 kg
♦ Power supply	230V / 50 Hz, 80VA,

Options:

♦ VIS 740	Step transformer 16,0 A For voltage fluctuation, fig.2

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