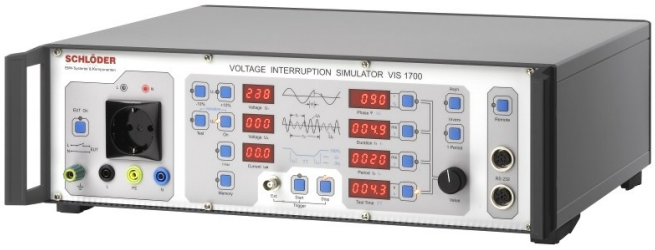
VIS 1700

Voltage interruption simulator

IEC / EN 61000-4-11 (AC),
IEC / EN 61000-4-29 (DC)*

- Automatic AC + DC ramp function (voltage fluctuations, 2. voltage source not necessary)
- Inrush current measurement at any phase position 0° - 360
- in *Approximation to* -4-29.



4 operating modes possible:
short time interruption,
voltage dip/fluctuation,
inrush current measurement

Overview

The VIS 1700 simulator can simulate the voltage dips and fluctuations occurring on the supply networks (AC and DC). Different operating modes are possible:

Short time interruptions 100 %:

Interruption of the supply voltage from the EUT from 100 % to 0 %. The supply network of the EUT can be interrupted in any phase position for a defined time t1* (0.1 ms - 9980 ms). Rise and fall time: 1 - 5 µs.

Voltage dips with external step transformer:

Reduction of the supply voltage from the EUT from 100 % to X %. Dips to 40 %, 70 % or 80 % of the nominal voltage can be simulated at a certain phase angle and a time x. This test requires a 2nd voltage source, which a step transformer with sufficient power fulfills - see option - accessory VIS 740. Rise and fall time: 1 - 5 µs

Voltage fluctuations with automatic ramp function (variation function):

Internal reduction of the supply voltage with adjustable ramps and adjustable test time. Fluctuation to an adjustable voltage (0 - 95 % of U1). The parameters for fall time, test time and recovery time (0.1 to 70 sec. each) can be set individually. For this purpose, it is not necessary to feed in a further voltage.

Inrush current measurement:

The inrush current can be measured at any phase position (0 - 360°) for each test object up to a maximum of 16 A rated current (AC).

**The specifications for the duration of the interruption t1 and the period t2 refer to a test object frequency of 50 Hz in synchronous operation. At 60 Hz, t1 and t2 change according to the ratio 50/60. The range of time t1 is then 0.0833... ms (display 0.08) to max. 8308.33... ms (display 8308). The range of time t2 is then 16.66... ms (display 16.7) to max. 8316.66... ms (display 8317).*

Key Facts

- For monitoring, three BNC sockets for the parameters voltage, current and trigger are provided at the rear of the device
- A step transformer is required for voltage dips (see Options: VIS 740)
- Clearly arranged display

VIS 1700

Voltage interruption simulator

Technical data

VIS 1700	
EUT supply	
Rated voltage and currents	
Short time interruption	
AC	max. 280 V / 16 A
DC	max. 360 V / 8 A
Voltage dips	*(with external step transformer)*
AC	max. 280 V / 16 A
DC	max. 360 V / 8 A
Voltage fluctuation	*(with automatic ramp function!)*
AC	max. 280 V / 16 A
DC	max. 360 V / 4 A
Phase angle	ϕ = 0 - 359°, step 1°
Duration t1*	0,1 ms - 9980 ms
Period t2*	asynchronous: 5,0 ms - 9990 ms sync: 20 ms - 9980 ms
Test time	0,1 sec - 9990 sec, single event and duration

Interface	RS-232
Connections	BNC (voltage, current and trigger)
Test sample connection	safety socket additional laboratory sockets
Phase display	LED red LED green
Operating temperature	0 - 40° C
Dimensions	19" housing (3 RU)
Weight	13 kg
Supply voltage	100 - 240 V / 47-63 Hz / 80 VA

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Technical data – Standard requirements

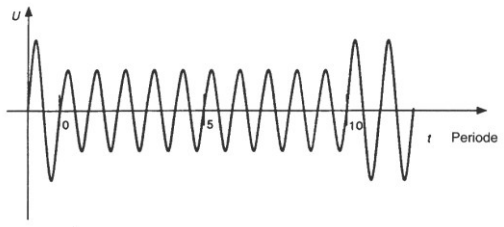


Fig. 1: Voltage dips, here 10 periods to 70%

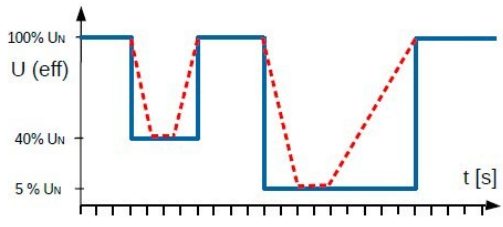
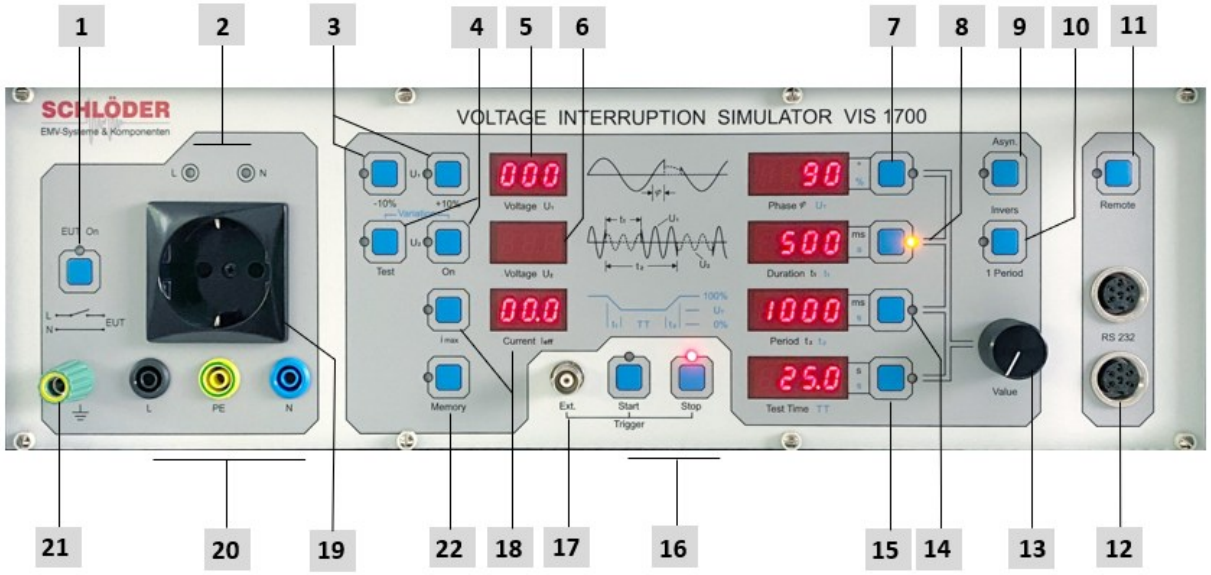


Fig. 2: Voltage fluctuations

VIS 1700

Voltage interruption simulator

Technical data: Functions



[1]	EUT on / off
[2]	Phase indication: LED red, LED red
[3]	Supply voltage $U_1 = U_N$ switchable to +10 % U_N and - 10 % U_N
[4]	Def. of the 2nd voltage U_2-test and U_2-On and activation of the ramp function
[5]	Display supply voltage U_1
[6]	Display changeable voltage U_2
[7]	Phase angle φ = 0 - 359°, step 1°
[8]	Duration t_1* 0.1 ms - 9980 ms
[9]	Interruptions / voltage variations synchronous and asynchronous
[10]	Inversion of a period
[11]	Activation RS 232
[12]	RS 232 interface
[13]	Setting of phase angle [7], duration [8], period [14] and test time [15] with digital potentiometer

[14]	Periode t_2 * *see technical data page 2* asynchron.: 5,0 ms - 9990 ms synchron.: 20 ms - 9980 ms
[15]	Test duration 0,1 sec - 9990 sec, single event and duration
[16]	Trigger: Start / Stop button
[17]	Trigger external: BNC - connection
[18]	Inrush current i_{max} / rated current measurement
[19]	Test sample connection: safety socket
[20]	Additional laboratory sockets
[21]	Earth connection: at front and rear
[22]	Memory button
Measurement technology : back side BNC connectors for voltage, current and trigger	
Supply "U_1": rear side	
Supply "U_2": rear side (e.g. step transformer)	

Options

VIS 740	Step transformer 16 A for voltage fluctuation
VIS 760	Diode in a housing, for DC mode with high impedance

All information regarding appearance and technical data correspond to the current state of development at the time of release of this data sheet. Errors and technical changes excepted. 032602