

PG 01-2000

Pulse generator

FNN - Guidelines Chapter 3.7.1

Guideline Reliability Electricity figures

- Pulse shape 0.1 / 2000 μ s
- Pulse voltage 4 kV - 10 kV



**Standard impulse voltage with
the waveform 0.1 - 2000 μ s**

Overview

The test generator PG 01-2000 is suitable for testing the insulation and the surge voltage resistance of electric and electronic electricity meters. The generator generates a standard surge voltage with a waveform of 0.1 / 2000 μ s at no load. By means of the built-in divider 1000:1 the pulse voltage can be easily checked.

The forum "Network Technology / Network Operation in VDE (FNN)" has dealt in detail with the topic of the reliability of electricity meters and defined corresponding test procedures. The requirements for the test generator PG 01-2000 are described in chapter 3.7.1 of the FNN "Guidelines for the evaluation of the reliability and measurement stability of electricity meters and additional equipment".

Key facts

- Memory function stores up to 32 settings
- Remote control via RS 232 interface possible



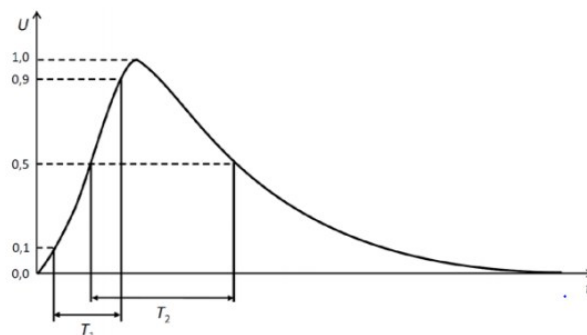
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Pulse generator

Technical data

PG 01-2000			
Pulse voltage	4,0 – 10,0 kV	Phase angle	$\phi = 0^\circ - 359^\circ$, 1° steps, mains synchronous triggering
Pulse shape	rise time $0,1 \mu\text{s}$ pulse width $2000 \mu\text{s}$ idle speed ($> 20 \text{ MOhm}$)	BNC socket for	voltage measurement $1 \text{ V} = 1 \text{ kV}$ test voltage
Waveform under load	50 Ohm open circuit voltage = 50 % U pulse width $2.773 \mu\text{s}$	BNC socket for	trigger pulse oscilloscope (TTL level)
Polarity	positive, negative, alternating	Test sample connection	HV cable
Max. repetition frequency	$0,1 \text{ Hz}$	Operating temperature	$0 - 40^\circ\text{C}$
Energy of the source	1 Joule - at 7 kV charging voltage	Dimensions	19 Housing (3 RU)
Impedance of the source	50 Ohm	Weight	10 kg
Interface	RS 232	Electronic input	100 - 230 V AC $47 - 63 \text{ Hz}$, 100 VA
Loading time	< 5 seconds		
HV output	earth-related		
Phase position / switch-on time	$0 - 359^\circ$, step size 1° Synchronization to the 230 VAC mains input		
Number of pulses	1 - 999		
Repetition rate	10 - 999 sec		

Technical data - Pulse definition



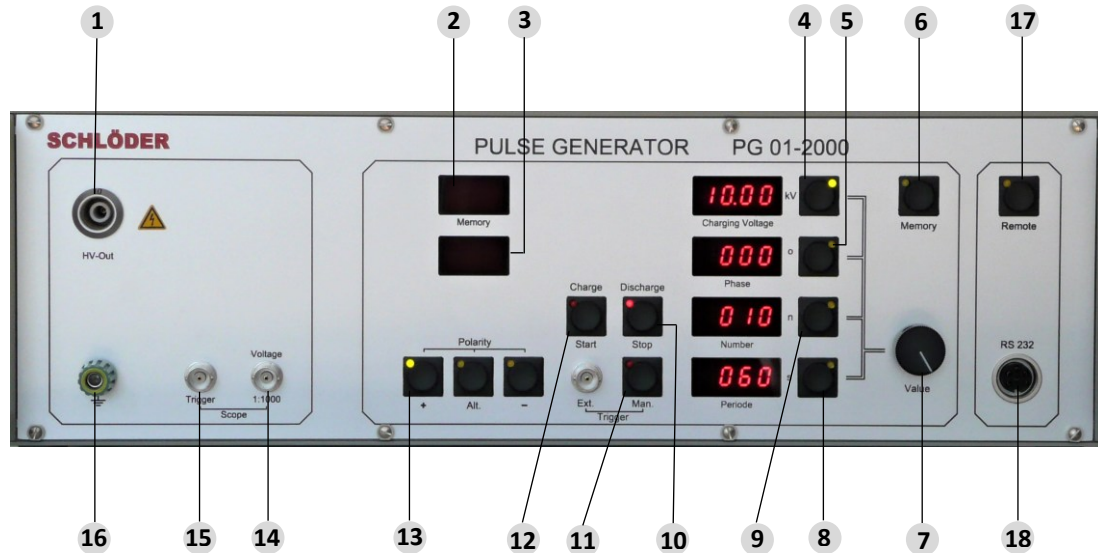
T_1 = Rise time $0,1 \mu\text{s}$
 T_2 = Pulse width $2000 \mu\text{s}$



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Pulse generator

Technical data: Functions



[1] HV output ground related

[2] Display Memory

[3] Display Memory: Memory location: 1 - 32

[4] Pulse voltage

[5] Phase angle

[6] Selection key for the memory function

[7] Adjustment with potentiometer

[8] Repetition rate

[9] Number of pulses

[10] Discharge: discharging the energy storage

[11] Trigger: manual or external

[12] Batch: charging the energy storage device

[13] Polarity

[14] BNC socket: voltage measurement

[15] BNC socket: Trigger pulse oscilloscope

[16] Earth connection: socket at the front and at the rear

[17] Enable remote control via RS 232

[18] RS 232 - interface

Backside safety jumper

All information regarding appearance and technical data correspond to the current state of development at the time of release of this data sheet. We reserve the right to make technical changes. 312503

