

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



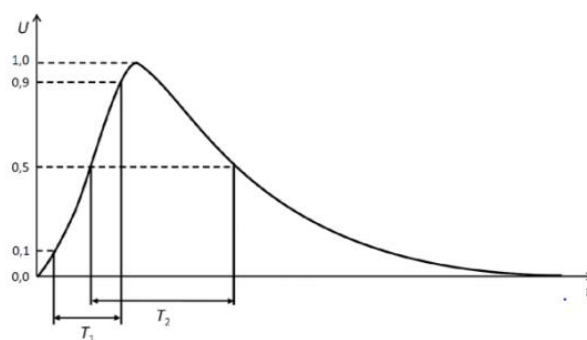
PG 01-2000

Pulse generator

Technical data

| PG 01-2000 | | | |
|-------------------------|---|------------------------|---|
| Pulse voltage | 4,0 - 10,0 kV | Phase angle | $\varphi = 0^\circ - 359^\circ$, 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 |
| Energy of the source | 1 Joule - at 7 kV charging voltage | Operating temperature | $0 - 40^\circ\text{C}$ |
| Impedance of the source | 50 Ohm | Dimensions | 19 Housing (3 RU) |
| Interface | RS 232 | Weight | 10 kg |
| Loading time | < 5 seconds | Electronics input | 230 V / 50 Hz / 2.5 A |
| HV output | earth-related | | |
| Number of pulses | 1 - 999 | | |
| Repetition rate | 5 - 999 sec | | |

Technical data - Pulse definition



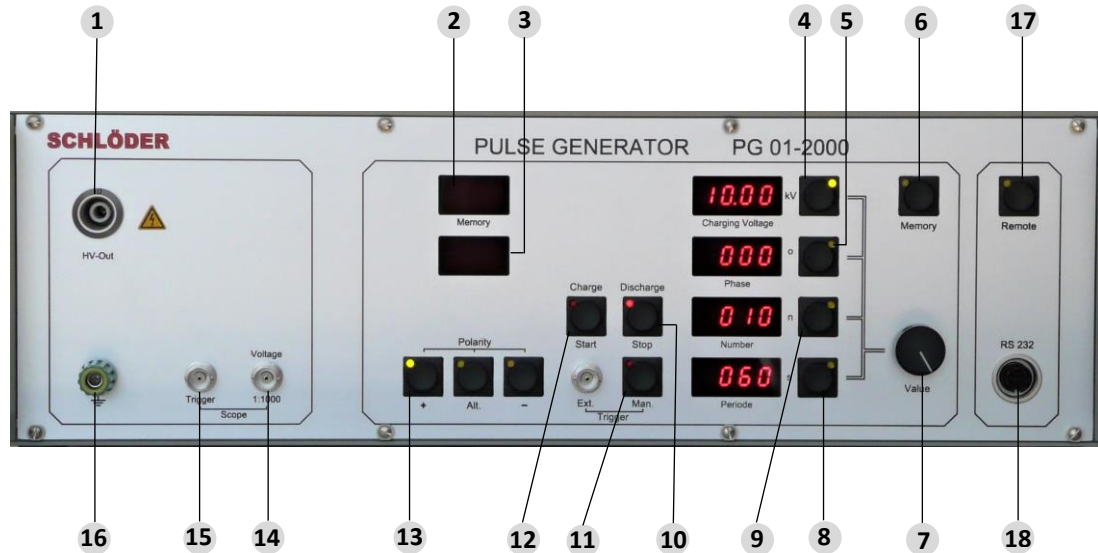
T_1 = Rise time $0,1 \mu\text{s}$
 T_2 = Pulse width $2000 \mu\text{s}$



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Pulse generator

Technical data: Funktions



[1] HV output ground related

[2] Display Memory

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

[4] Pulse voltage 4.0 - 10.0 kV

[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. 032008

