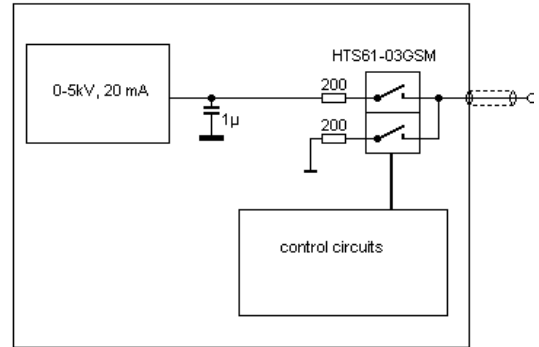


RUP3-5A

Rossendorfer Universal Pulse Generator

The pulse generator RUP3-5A is a small scale high voltage pulse generator for electrostatical applications. It includes pulse active switching off, a voltage up to 5kV and frequencies up to 5 kHz.



principal scheme of RUP3-5A

Voltage and current

Voltage 0...5 kV, adjustable
average current >20 mA max.
output impedance ~200 Ohm,
peak current around 25A (short circuit), practical values are up to 1A
maximum output power >100W
Accuracy of voltage monitor output signal will be better 1%, ripple on the voltage will be smaller than 0.5%.

pulse shape and frequency

square wave, rise and fall time depending on load capacity. Without any load, switching time may be around 150 ns. Switching time will be below 0.6 µs as long as load capacity does not exceed 500 pF.
pulse width 0.2 µs - ∞ (useful maximum pulse width with currents > 10 mA is determined by the discharge of the internal pulse capacitor of 1µF)
duty cycle up to 100% possible.
maximum frequency 5 kHz. Maximum switching frequency may be lower if load capacity exceeds 500 pF.

mechanical, included items

19" rack 6 HE (483 *267 mm), 600 mm deep display for voltage and average current 10-turn potentiometer on front plate for adjustment of voltage.
Alternatively voltage can be set by analog control input (BNC, 10V =: 5000V), changing between internal and external control is done by a switch on the front plate.

control input 4-10V signal at 200 W (standard TTL suggested)
voltage monitor output 1:1000
output with SHV connector, 1.5m output cable RG59 included.
manual, schematics

environmental conditions

environmental temperature 5-35°C
humidity 0-80%, the pulse generator is intended for the use in dry rooms.
protection class I, IP20
supply voltage 220V-240V~, 200W max.

safety

external interlock
the pulse generator is protected by resistors from damage by arcs or short circuits.
short circuit currents are limited to 25 A.
The pulse generator is conformal to regulations about electromagnetic compatibility (EMC).

not included, but strongly recommended

Arbitrary signal generator HP33120A or similar
TTL
pulse generator for control
digital oscilloscope, e.g. TDS210 or similar

12.06.2006