

RE-2302

Recurrent Surge Generator



RE-2302 model recurrent pulse generator is a sort of equipment simulating various pulse waveforms, through the selecting switch change the pulse line different parameters, you can get the same high voltage pulse generation wave form of the high voltage test. It can be used for motors, reactors, power transformers, instrument transformer coil internal pulse, and impulse voltage distribution (potential gradient) simulation test and insulation deficiency location. There is no damage to the coil. Can also be used for high voltage impulse generator's middle and terminal wave parameters preset, test system transmission properties and cable and coil transient waveform measurement. The charging voltage amplitude is from 0~400V tunable. Repeated frequency is 25 Hz. This instrument is particularly suitable for the High voltage Lab, transformer plants, electrical plants, instrument transformer plants and school lab use.

Working Principle

The lines formed by the pulse are the pulse wave generator main loop simulation, among them the charging capacitance C_s , wave front resistance R_s , Wave tail resistance R_p , Load capacitance C_b , System inductance L , all can be in a certain range carry any adjustment. Thus

different type of pulse waveform can be obtained from the output port. Inside the device, there is a dc source regulator supplying the main loop capacitance C_s with a stable charging capacitance. Its value can be continuously tuned from 0~400V. During the discharge, the time controller output give silicon controlled rectifier a triggering signal, therefore there will be a pulse waveform inside the discharge loop. The pulse frequency is controlled by the time controller, with an external charging capacitance C_s , its frequency is 3Hz, when a single time manual operation is needed there is a manual switch control, then connect a pulse to the switch output, when using an internal charging capacitance the impulse frequency is 250Hz, time controller frequency is generated by the power frequency's sub-frequency, therefore the frequency stability makes easier the general oscilloscope testing.

The internal output device can also trigger the oscilloscope to delay the pulse. The impulse delay must be in a certain range ($-10\mu s \sim +60\mu s$), the pulse delay regulation is carried after output by the time controller, the amplitude are 250V and 10V, the two levels. The impulse chopped wave is completed through the silicon controlled rectifier. the time controller output give silicon controlled rectifier a chopped wave signal, the chopped wave time can be adjust between $0.4\mu s \sim 14\mu s$.

The time controller is the device core part, therefore it uses high speed components, makes it work at high electrical level condition, it has anti-interference features, and is more stable. All the operations, control are carried on the panel, very convenient.

Technical Specifications

Charging Voltage: 0~400v \pm 2%

Impulse Shape: wave front 0.5 μ s, wave tail 6500 μ s

Impulse Frequency: 25Hz (3 Hz external connectionCs)

Impulse Delay: -10 μ s~+60 μ s amplitude +10vp or 250vp

Chopping time: 0.5 μ s~16 μ s

Charging capacity Cs : 4.7/6.8/10/22/33/47/68/100/220/330/470/680/1000nF/Ext (Maxx10 μ F)

Series Resistor Selector(wave front), Rs: 3.3/4.7/6.8/10/15/22/33/47/68/100/150/220/330/470/680/1K/
1.5K/2.2K/3.3K/4.7K/Ext

Parallel Resistor Selector(wave tail), Rp: 10/15/22/33/47/68/100/150/220/330/470/680/1K/1.5K/2.2K/
3.3K/4.7K/6.8K/10K/15K/ Ext

Inductance Selector, L: 0/10/20/30/40/50/60/70/80/90/100 μ H

Load Capacitance Selector, CL:0.47/0.68/1/2.2/3.3/4.7/6.8/10/22/33/47/68/100nF/ Ext

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