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MODEL PT55 PULSER/TRIGGER GENERATOR OPERATING GUIDELINES

Except where noted the following applies to all PT55 series generators

SAFETY PRECAUTIONS

As with all high voltage devices, the PT55 series generators should be treated with the same precautions and only operated by persons familiar with safe high voltage practices. **Do not under any circumstances handle the generator with D.C. potential applied.**

OPERATION GUIDELINES

Electrical Connections	All PT55 series generators require + (positive polarity) inputs, i.e. + D.C. charge and + trigger input.
Factors Affecting Jitter	Where jitter requirement is critical, operate at maximum D.C. charge (+ 7kV.), with 600 volts or more trigger pulse. (See note 1).
Reduced D.C. Charge	When long life is desired, operate at lower D.C. charge (+ 5kV. min.) will reduce internal stresses. Life of 10,000 shots is not unusual.
Isolation Requirements	Triggering spark gaps up to 25 kV. anode potential, 100 Ohms resistance of proper voltage withstanding is sufficient, thereafter 4 Ohms/kV. up to 100 kV. max. Spark gap trigger electrode biased off ground, will require D.C. blocking of appropriate voltage rating and capacitance (typically 500 pF.)
Trigger Input	The trigger input impedance is 50 Ohms. Trigger amplitude 250 volts min., pulse width not less than 150 nS., risetime 10 nS. Max. (see note 2).
Operating Environment	When siting the PT55 in an adverse environment, such as high altitude, humidity or submersion in oil, a P T55-S (hermetic sealed model) is mandatory. Do not operate other models in oil or an environment other than ambient air. Due to its internally controlled environment, model PT55-S also has higher output voltage, (over 60kV. @ 7kV. D.C. charge).
Output Connection	The PT55 should be closely coupled to the triggered device. Output is taken from the 3/8-16 stud (hot) and ground return is via the 1/4-20 screw. There is approx. 1500 Ohms output shunt resistance, which would automatically tie the triggered electrode to ground, for example, spark gaps with + and – balanced charge.

Notes: 1) The PT55 series generators, when triggered by a mercury reed pulser, jitter is less than 2 nS.

2) Our PT003/006 solid state trigger generators, will accept TTL level inputs, and reliably fire all models of PT55.