



**ZEONICS SYSTECH**  
DEFENCE & AEROSPACE ENGINEERS (P) LTD.



# High Voltage Trigger & Pulse Transformers



Whenever there is a pulse power equipment which requires a transient change in voltage, that is,  $dv/dt$  or  $di/dt$ , these circuits all require Pulse transformers. These transformers are used for different types of applications and are core based (air, iron, ferrite, etc). We also manufacture very fast rise time transformers in the region of nano seconds. We manufacture High Voltage Pulse Transformer of different types which range from input of 50V to 5000V and outputs of 5kV to 400kV pulses.

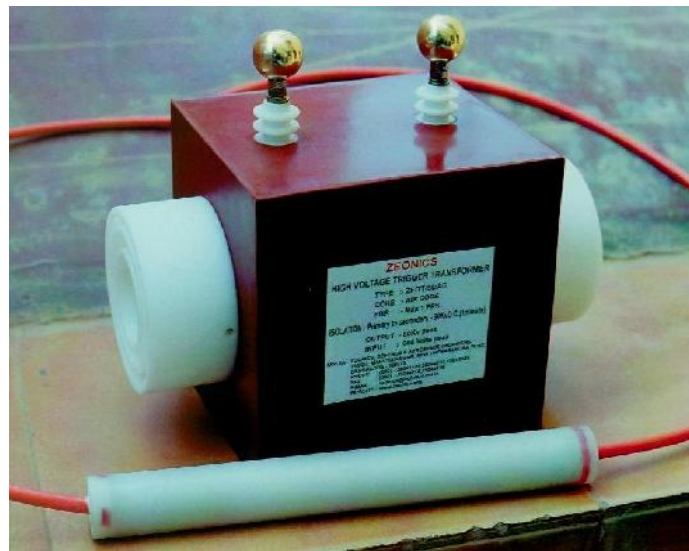
Proudly Made in INDIA





## HV Trigger Transformer

- |                    |                                    |
|--------------------|------------------------------------|
| 1. Working Voltage | : 600 Volts Pulse                  |
| 2. Maximum Input   | : 700 Volts pulse                  |
| 3. Isolation       | : 50kV DC primary to Secondary     |
| 4. Rise time       | : 10% to 90% is 60nSec to 95nSec   |
| 5. Output          | : Approximately 20kV to 25kV Pulse |
| 6. PRR             | : Maximum 30 pulse / minute        |
| 7. Maximum Energy  | : 15 Joules                        |
| 8. Temperature     | : -20°C to +75°C                   |
| 9. Type No.        | : Z/32/55                          |



## Air Based Multi-primary Transformer for Pulse

- |                |   |
|----------------|---|
| 1. Input       | : Maximum voltage 600V input (can be changed) |
| 2. Output      | : Maximum voltage 60kV pulse                  |
| 3. Isolation   | : 90kV D.C.                                   |
| 4. PRR         | : Maximum 1 pps                               |
| 5. Energy      | : Maximum 100 Joules                          |
| 6. Temperature | : -20°C to +85°C                              |
| 7. Type No.    | : ZE/TT/60/AC                                 |



## Low Inductance High Discharge Current Circular Geometry Trigger Generator

1. Input Voltage : 24 Volts D.C. / 28 Volts D.C.
2. Output Voltage : Typically 80Kv pulse
3. Rise time of the pulse : Typically 900ns Control, manual, +5V, fibre optic signal.
4. Total weight of system : 30kgs
5. System body : SS304
6. Type no : ZHS/01/63
7. The entire trigger generator can go in a hollow cavity of 180 Millimetre Diameter.



## Nuclear Hardened High Voltage Pulse Transformer

1. Input : 800V pulse (can be used for 200V- 800V)
2. Output : 100kV Pulse
3. Isolation : 120kV D.C.
4. Maximum Energy : 100 Joules
5. Temperature : -20°C to +90°C
6. Maximum Neutron Flux :  $1 \times 10^{11}$  Neutrons
7. Type No. : Z/30/112 (809)

## Applications

Fast rise time transformers and regular pulse transformers are used for switching, gas ignition, in missile stage firing, in missile bolt firing, medical applications, in liner accelerators, impulse generators, etc. They are also used for applications where Spark Gaps have to be fired in Z pinch plasma.

## Advantages

Transformers from Zeonics are very compact in nature, simple in construction, and occupy minimum space. They are fully hardened by way of connections and cables.

As we manufacture our own connectors and cables for this, these transformers come with integrated connectors, cables, etc., making them very safe for use in applications where any kind of ground discharge or any kind of stray discharges are not allowed.

The transformers can be used in metallic as well as non-metallic enclosures. We have transformer which are very small as well as very large in size. Pulse Transformers range from 100grams to 100kgs, depending on the specifications required. We have transformers which can give large pulse widths also in microseconds and milliseconds.

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