

## PRODUCT DESCRIPTION

HIGH VOLTAGE POWER SUPPLIES BASED ON PULSE STEP MODULATION TOPOLOGY

### OVERVIEW

Pulse step modulation (PSM) based high voltage power supplies are inherently fast and have low stored energy. They are extremely popular with

- Accelerators/Transmitters using RF energy. High Power RF Tubes need High Voltage for Bias.
- Accelerators using Electrostatic Extraction and Acceleration directly use High Voltage. (e.g., Ion Source for Neutral Beam Injectors, Electron beam)



These applications require voltage range extending from 30 - 100kV. Output power upto 10MW. The Source should be a Constant Voltage Source, stable in long term. Should have Low Ripple and Low Stored Energy. Should have a very fast Turn-OFF Time (micro second order) for low fault energy dump. Should have programmable rise time ~few tens of micro seconds to milli seconds. Should support power modulation 1kHz and beyond.

### PRESENT STATUS OF THE PRODUCT

In-house technology available with IPR for PSM based High Voltage Power Supply (HVPS) is proven for above applications and been in the field from past few decades. The supplied HVPSs are successfully commissioned and operational with actual loads at various installations including European facility.

### APPLICATION

High Power RF Amplifiers, Gyrotrons, Klystrons, electron beam, extractor/accelerator of Ion sources.