



## Fundamentals of Industrial Measurement Technology

# Electrical Excitation



ProDSP Post Series Nr.28.



One of the fundamental prerequisites of testing is **ensuring** that the device under test operates in an **appropriate electrical environment**.

This may involve **stable power delivery, precise reference voltages, or even complex time-dependent waveforms**.

In the **upcoming posts**, three major areas will be covered:





# 1. Electrical power supplies

- DC and AC supplies
- Voltage, current, and power ranges
- Stability, protection, sensing capabilities
- Special functions (load / sink operation)





## 2. DC voltage excitation

- Low power, high accuracy
- Reference voltages, sensor and ADC simulation
- Differential vs. common (single-ended) outputs





## 3. **Waveform excitation**

- Periodic signals (sine, square, triangle)
- Aperiodic, arbitrary waveforms
- Function generators and DAC-based solutions





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