„Introduction to Power Electronics“

Referents:

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What is Power Electronics?

Power Electronics provides conversion
- continuous (stepless)
- with high efficiency
  of physical quantities:
  - voltage
  - current
  - power
What is Power Electronics?

Power Electronics provides conversion:
- static (without moving parts)
- with high efficiency

by power semiconductors:
- diodes
- thyristors
- transistors
Power Electronics Applications

• conversion of voltage(s), current(s) and frequency
• compensation of disturbances (voltage fluctuations etc.)
• reduction of tolerances (improved use of material and design)
• control of facilities and equipment
Electrical Energy Conversion by Converters (Power Electronics)

Converter

... if output frequency = input frequency:
(AC) Power Controller

Gleichrichter (Rectifier)

DC/DC Converter
Chopper Controller

Gleichstromsteller

Umrichter

(wenn Ausgangsfrequenz identisch zu Eingangsfrequenz: Drehstromsteller)

Wechselrichter (Inverter)
Thank you !!!