



Z-Source Inverter for Motor Drives

Objective:

To develop a reliable inverter for motor drives with ride through ability and improved input power factor.

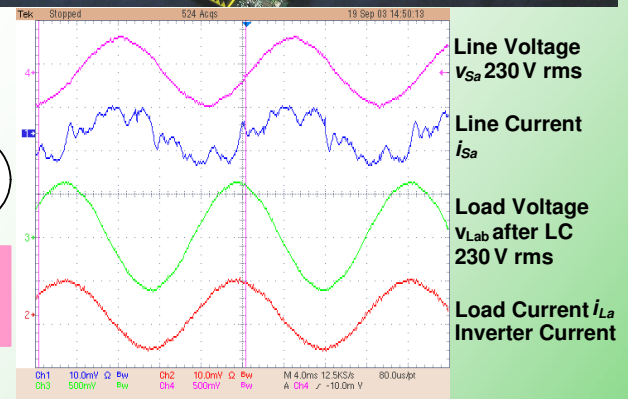
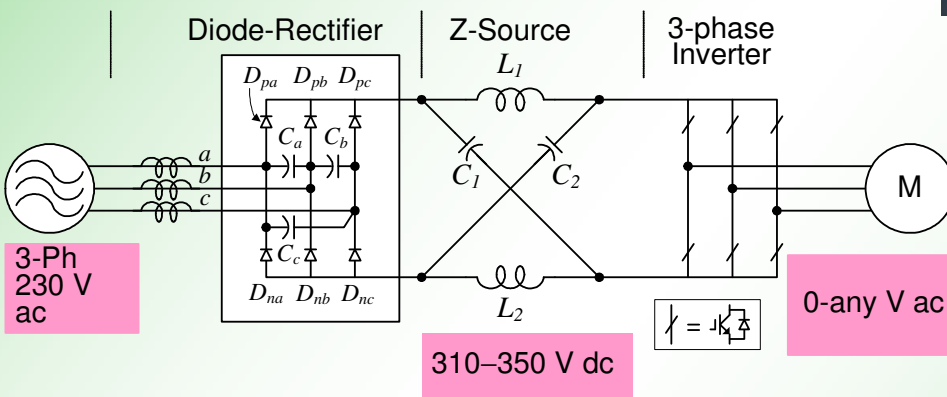
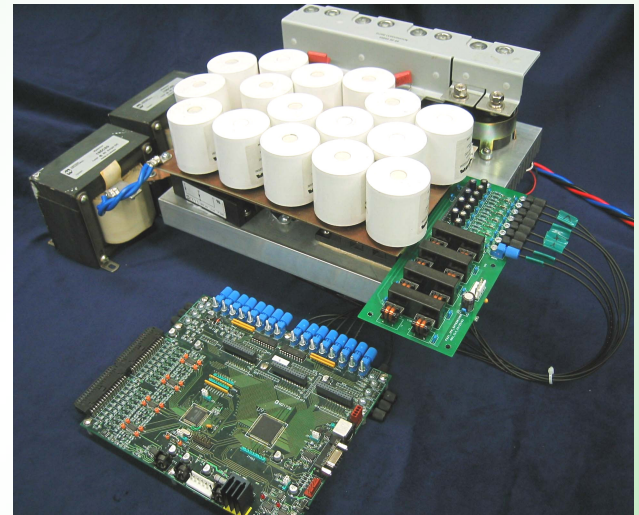
Features:

- Able to produce any desired output ac voltage, even greater than the line voltage, regardless of the input voltage, thus reducing motor ratings
- Able to provide ride-through during voltage sags without any additional energy storage elements
- Immunity to EMI noise greatly increases reliability
- Improves power factor and reduces harmonic current and common-mode voltage.

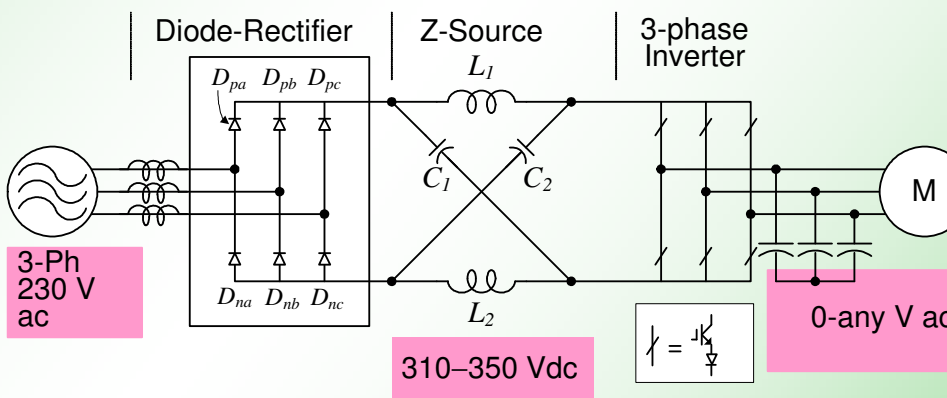
Application Examples:

- Adjustable Speed Drives

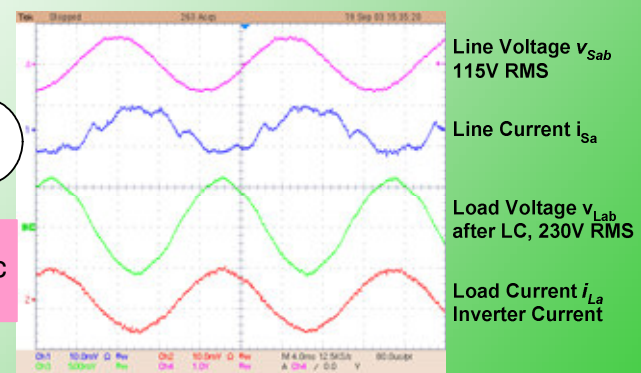
10kW Z-Source Inverter Prototype



Voltage Fed Z-Source inverter for ASD



Experimental waveforms under the nominal line voltage of 230 Vac



Experimental waveforms under 50 % voltage sag