Scilab Manual for Power Electronics and Drives Laboratory by Prof Jesus Bobin Electrical Engineering St.xavier'S Catholic College Of Engineering¹

Solutions provided by
Prof Jesus Bobin
Electrical Engineering
St.xavier'S Catholic College Of Engineering

September 7, 2025

¹Funded by a grant from the National Mission on Education through ICT, http://spoken-tutorial.org/NMEICT-Intro. This Scilab Manual and Scilab codes written in it can be downloaded from the "Migrated Labs" section at the website http://scilab.in



Contents

List of Scilab Solutions		3
1	Simulation of single phase semiconverter	5
2	Simulation of three phase semiconverter	7
3	Simulation of single phase fullconverter	10
4	Simulation of three phase fullconverter	12
5	DC to DC converters	15

List of Experiments

List of Figures

1.1	Single Phase semi converter	6
	three phase half converter with resistive load	8
3.1	Single Phase Fully Controlled Converter	11
	three phase full converter with resistive load	13 14
5.1	Boost converter	16

Simulation of single phase semiconverter

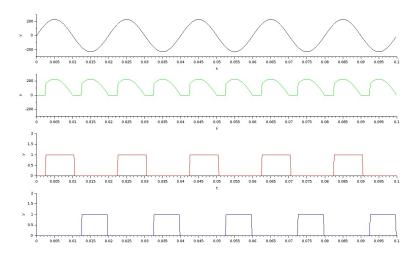


Figure 1.1: Single Phase semi converter

Simulation of three phase semiconverter

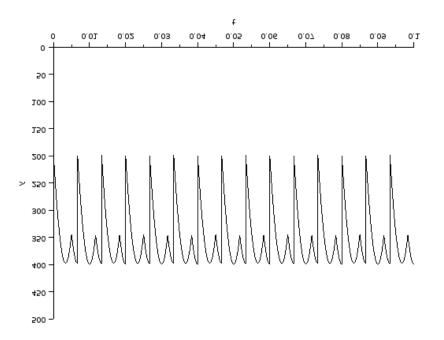


Figure 2.1: three phase half converter with resistive load

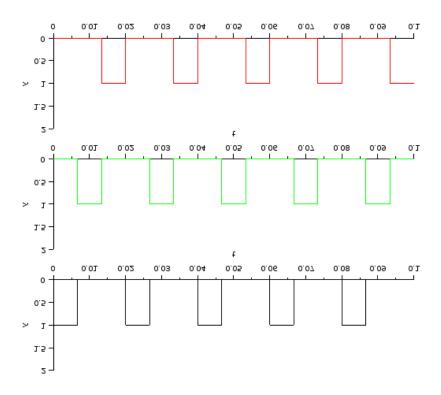


Figure 2.2: three phase half converter with resistive load

Simulation of single phase fullconverter

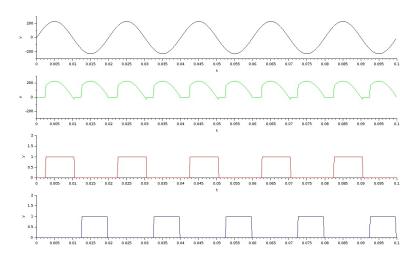


Figure 3.1: Single Phase Fully Controlled Converter

Simulation of three phase fullconverter

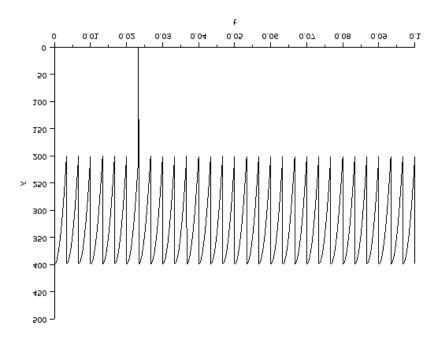


Figure 4.1: three phase full converter with resistive load

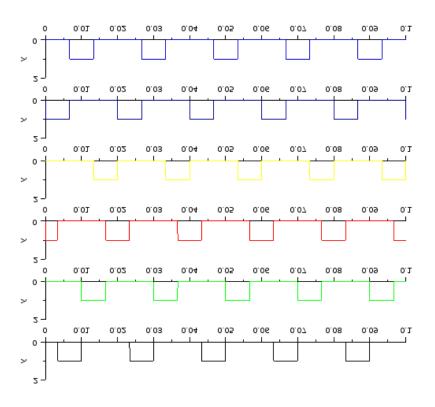


Figure 4.2: three phase full converter with resistive load

DC to DC converters

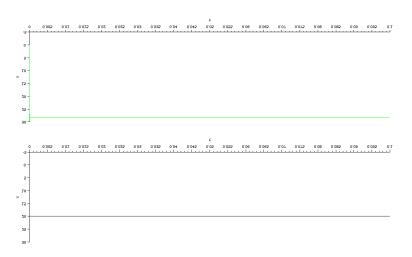


Figure 5.1: Boost converter