

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

February 9, 2026

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
2.1	three phase half converter with resistive load	8
2.2	three phase half converter with resistive load	9
3.1	Single Phase Fully Controlled Converter	11
4.1	three phase full converter with resistive load	13
4.2	three phase full converter with resistive load	14
5.1	Boost converter	16

Experiment: 1

Simulation of single phase semiconverter

This code can be downloaded from the website www.scilab.in

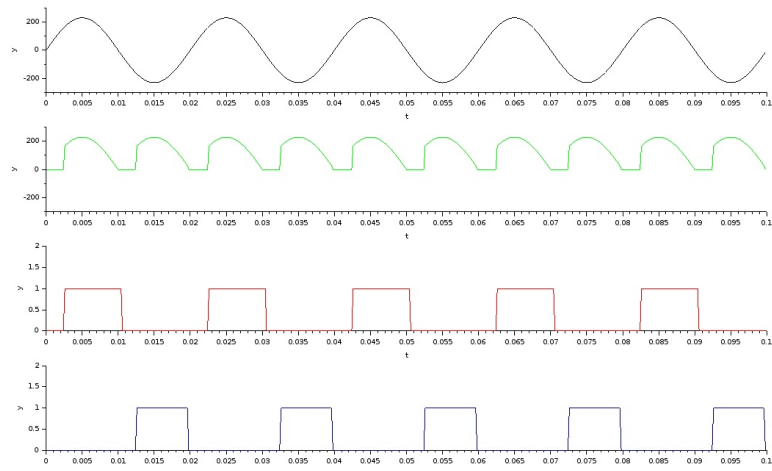


Figure 1.1: Single Phase semi converter

Experiment: 2

Simulation of three phase semiconverter

This code can be downloaded from the website www.scilab.in

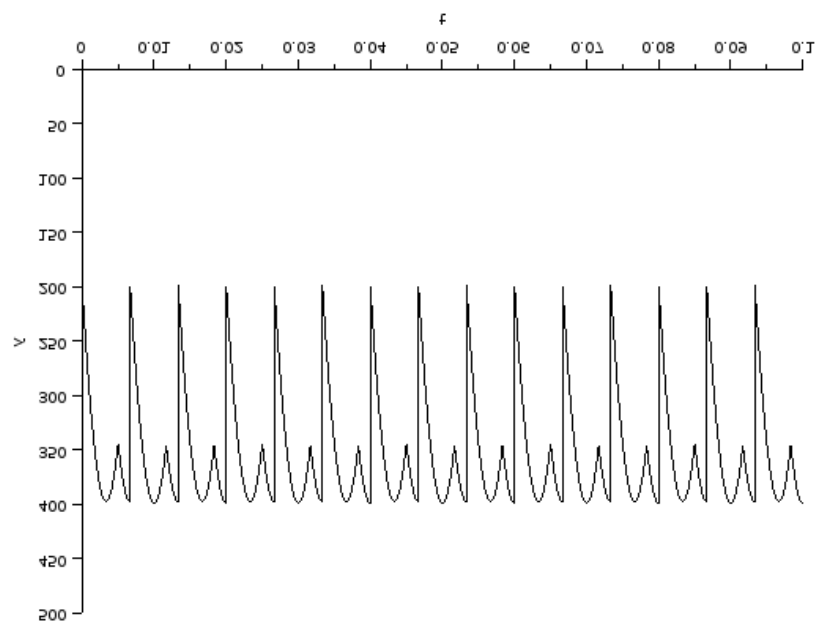


Figure 2.1: three phase half converter with resistive load

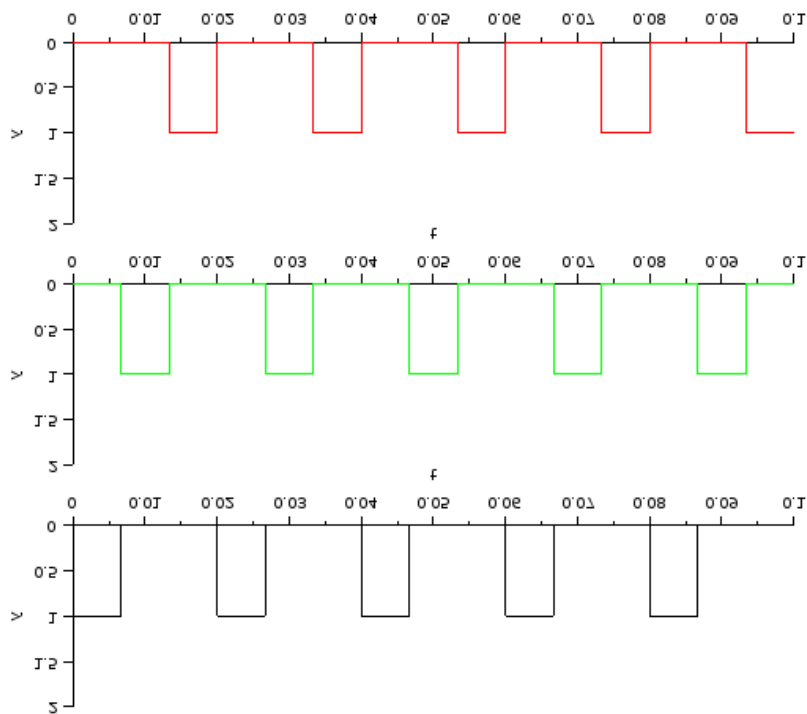


Figure 2.2: three phase half converter with resistive load

Experiment: 3

Simulation of single phase fullconverter

This code can be downloaded from the website www.scilab.in

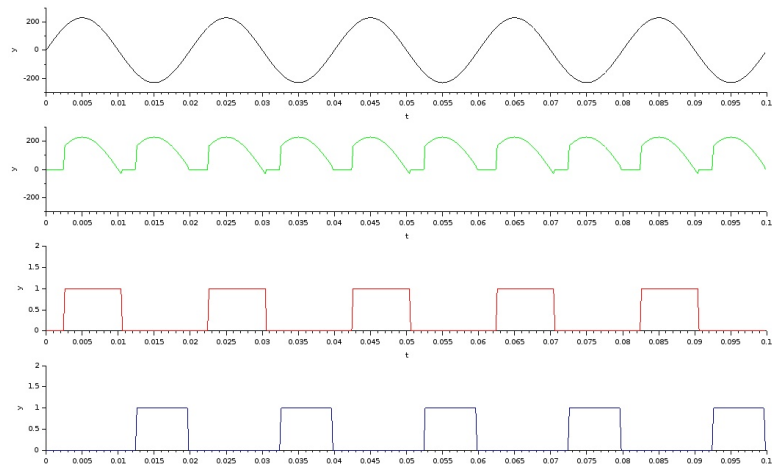


Figure 3.1: Single Phase Fully Controlled Converter

Experiment: 4

Simulation of three phase fullconverter

This code can be downloaded from the website www.scilab.in

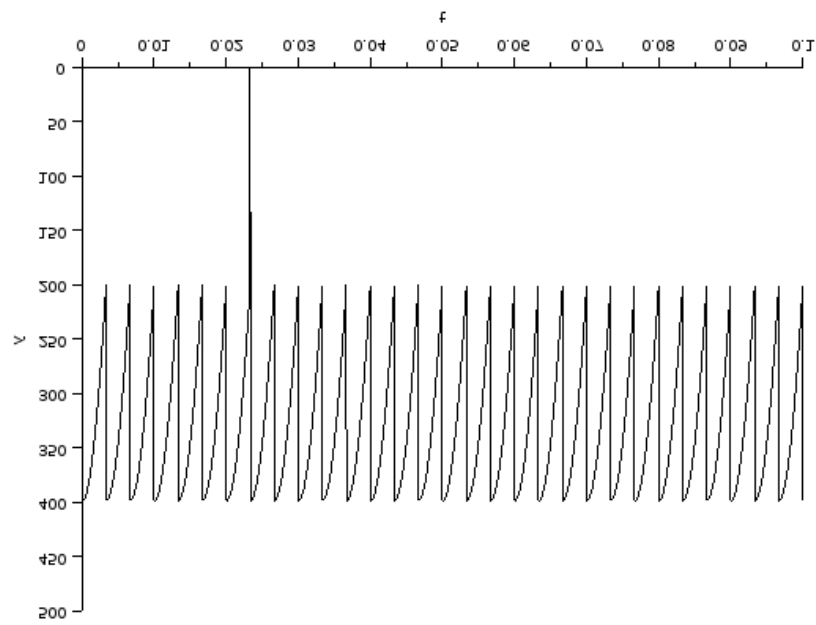


Figure 4.1: three phase full converter with resistive load

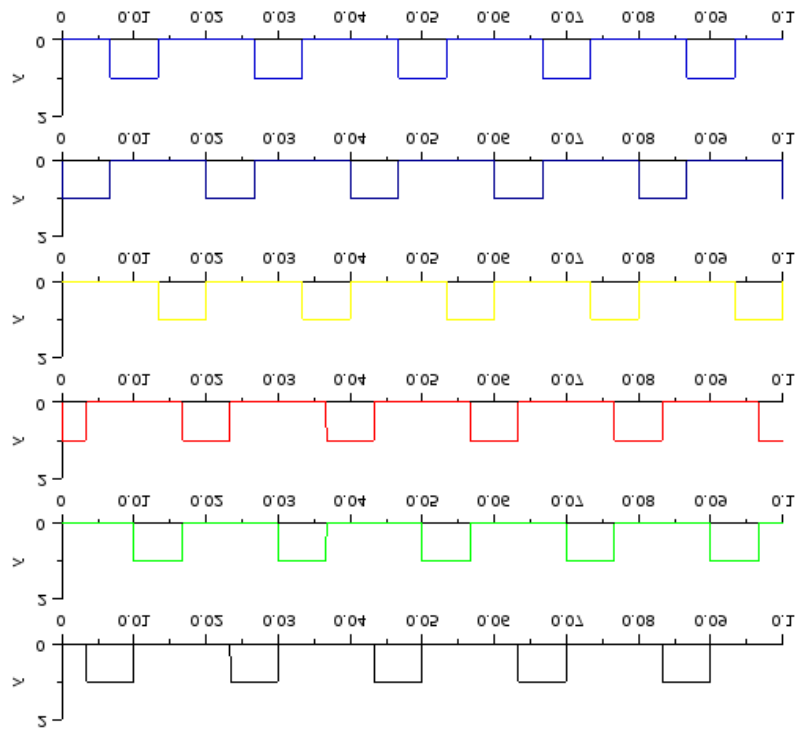


Figure 4.2: three phase full converter with resistive load

Experiment: 5

DC to DC converters

This code can be downloaded from the website www.scilab.in

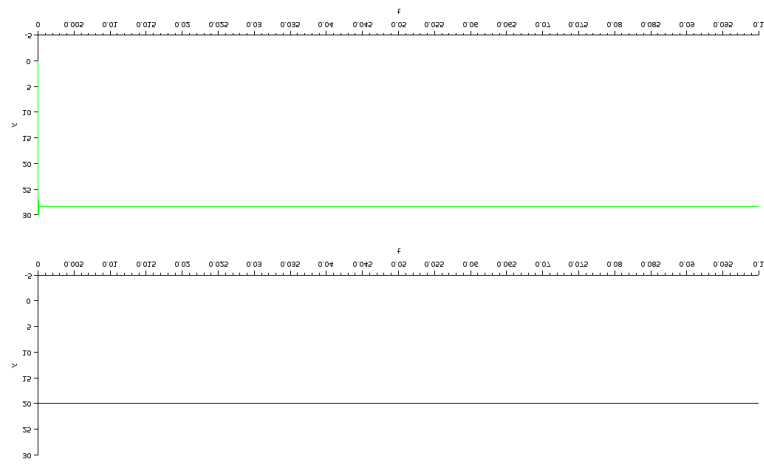


Figure 5.1: Boost converter