Transformer less Voltage Stabilizer

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Session 2014-18

A Report is submitted to the Department of Electrical Engineering,
Bahria University, Islamabad.
In partial fulfillment of requirement for the degree of BS(EE) .

Certificate

We accept the work contained in this report as a confirmation to the required standard for the partial fulfillment of the degree of BS(EE).

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Dedication

We dedicate our dissertation work to our family and many friends. A special gratitude to Mudasir Wahab whose words of encouragement have supported us throughout the process.

May "ALLAH" dependably showers His approval upon them and favours them with the best of their wellbeing and long life.

(Ameen)

Acknowledgements

We wish to thank our faculty members who were more than generous with their expertise and precious time. A special thanks to Mudasir Wahab, our supervisor for his countless hours of reflecting, reading, encouraging, and most of all patience throughout the entire process.

Abstract

In this project, a transformerless voltage stabilizer has been proposed to maintain continuous voltage during a wide range of voltage stability. The proposed AC voltage stabilizer for the practical IGBT switches has been investigated for both the manager and the automatic control circuit. A part of the output voltage is taken as a control circuit input voltage and produces error signal if there is a change in output voltage. Revised fault signal is used to make PWM signals for switching devices according to the output voltage stability. The PWM has controlled the current / off time of proposed switching devices (IGGT) of suggested stability. As a result, the stabilizer supply constant voltage in load during any change in the supply voltage. The simulation waveforms and calculations of the total Harmonic distortion (THD) values are compared with previously studied AC buck boost stabilizer. Output voltage, output current and input current and THD values have been improved in the case of proposed AC voltage stabilizer.

Table of Contents

Certificate…….....i
Dedication…….....ii
Acknowledgements……...iii
Abstract……..iv
Chapter 1.....1
1. Introduction…….....1
Chapter 2…….....4
2. Literature Review …….....4
2.1 Review the relevant research……5
2.2 Overview of the most scientific papers works on AC-AC voltage stabilizer…….....5
2.2.1 AC-AC Voltage Stabilizer Review…….....5
2.2.2 AC-AC BUCK-BOOST VOLTAGE Storage Review(Manuallycontrolled)....10
Chapter 3…….....12
3. Requirement Specification …….....12
3.1 The microcontroller …….....13
3.2 The crystal oscillator…….....14
3.3 The IR 2110…….....15
3.4 The PWM IC…….....15
Chapter 4…….....16
4. System Design …….....16
4.1 system implementation 17
Chapter 5 …….....21
5. System Implementation…….....21
5.1 The Arduino board …….....22
5.2 AC to DC conversion Circuitry 24
5.3 PWM Generation Circuit…….....26
5.4 The driver circuit…….....31

5.5 Wireless Transmitter and receiver……..32

5.6 LM2596 buck converter circuit……..33

5.7 The programming……..34

Chapter 6……35

6. System Testing and Evaluation……35

6.1 Full Wave Rectifier……36

6.2 Buck-Boost Converter……37

6.3 Half Bridge Inverter……...37

6.4 Transformer Less Voltage Stabilizer Circuit…….....38

Chapter 7……39

7. Conclusion…….39

References ……..41

Appendices……..43

List of Figures

Figure 2.1 AC-AC Buck converter…….....6
Figure 2.2 AC-AC Buck converter (with ideal switches)……6
Figure 2.3 AC-AC Buck converter (with IGBT switches)……..7
Figure 2.4 Input and Output voltage waveforms…….8
Figure 2.5 Generated PWM signals…….9
Figure 2.6 Input and Output voltage waveforms…….9
Figure 2.7 AC-AC Buck-Boost converter (with IGBT switches)……...11
Figure 2.8 Input and Output voltage waveforms…….11
Figure 3.1 Arduino Board…….....13
Figure 3.2 Micro-controller…….14
Figure 3.3 Crystal Oscillator……...15
Figure 3.4 PWM IC…….……....15
Figure 4.1 Automatic Voltage Stabilize……..18
Figure 5.1 Design of Arduino Board……...22
Figure 5.2 AC - DC conversion circuit...…….....24
Figure 5.3 PWM Generation circuit……25
Figure 5.4 PWM Diagram……...25
Figure 5.5 DC – AC inverter circuit……27
Figure 5.6 Basic Diagram of Full Bridge Topology……28
Figure 5.7 Complete Diagram of Full Bridge Topology…….29
Figure 5.8 Complete Schematic Diagram of Full Bridge Topology……...30
Figure 5.9 The driver Circuit……...31
Figure 5.10 LM2596 Buck converter circuit…….33
Figure 6.1 Full Bridge Rectifier circuit……...36
Figure 6.2 Variable Voltage Buck boost converter circuit……..37
Figure 6.3 Half Bridge Inverter circuit……37
Figure 6.4 Complete Circuit Diagram of TransformerLess Voltage Stabilizer……...38