

DESIGN AND CONSTRUCT OF NEW PRE-CHARGING UNIT FOR NEW
PRODUCT FAMILIES OF AECONVERSION BELONGING TO DC-GRID
APPLICATION

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.



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ABSTRACT

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Currently, many countries in the world are competing to use renewable energy in order to reduce the level of fossil energy consumption that was used before and reduce the level of pollution produced. One of these countries is Germany, which collaborates with existing companies to build a new electrical energy ecosystem that will be used in industries. This thesis will aim to design and construct pre-charging unit that will be used in industries. In this thesis work will be discussed starting from the cost analysis, selection of materials for the hard casing of the pre-charging unit and the selection of electronic components to be used in the pre-charging unit to meet the specifications required by consumers. In addition, it will also be analyzed by conducting performance tests involving mechanical test and electrical test. Later these things will be used for the future production process.

Keywords: DC industry, DC-grid, Pre-charging unit, Choke, PCB.



DEDICATION

I dedicate this work to my beloved family, friends, advisors, AEconversion GmbH
Co. & KG, and the customer of this product.



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TABLE OF CONTENTS

	Page
STATEMENT BY THE AUTHOR.....	2
ABSTRACT.....	3
DEDICATION.....	5
ACKNOWLEDGEMENTS.....	6
TABLE OF CONTENTS.....	7
LIST OF FIGURES.....	9
LIST OF TABLES.....	11
CHAPTER 1 - INTRODUCTION.....	12
1.1 Background.....	12
1.2 Research Problems.....	13
1.3 Research Objectives.....	13
1.4 Significance of Study.....	13
1.5 Research Questions.....	14
1.6 Hypothesis.....	14
CHAPTER 2 - LITERATURE REVIEW.....	15
2.1 Theoretical Perspectives.....	15
2.1.1 Pre-Charging Circuit or Unit.....	15
2.1.2 Creo Parametric 3D Modelling Software.....	16
2.1.3 eCADSTAR 3D PCB Design Software.....	17
2.1.5 Printed Circuit Board (PCB).....	17
2.1.7 Power electronics components.....	18
2.1.7.1 Diode.....	19
2.1.7.2 Capacitor.....	19
2.1.7.3 Transistor.....	20
2.1.7.4 Choke (Inductors).....	20
2.2 Related studies.....	21
2.2.2 Comprehensive Analysis of Pre-Charge Sequence in Automotive Battery Systems.....	21
2.2.3 Thermal management in high-density power converters.....	22
CHAPTER 3 - RESEARCH METHODS.....	23
3.1 Design Justification.....	23
3.1.1 General methodology.....	26

3.2 Components of Design.....	28
3.2.1 Mechanical Design	28
3.2.2 Electrical Design.....	33
3.2.3 Component or material selection for pre-charging unit.....	41
3.2.3.1 Choke	42
3.2.3.2 Microcontroller IC	55
3.2.3.3 Printed circuit board.....	56
3.2.3.4 Metal sheet for chassis	58
3.3 Performance test.....	59
3.3.1 Electrical test	59
3.3.1.1 Voltage input test	59
3.3.1.2 Relay conduction test.....	59
3.3.2 Mechanical test	60
3.3.2.1 Shock test.....	60
3.4 Project Timeline	60
CHAPTER 4 – RESULTS AND DISCUSSIONS.....	62
4.1 Choke	62
4.1.2 Inductance test	62
4.1.3 Choke temperature measurement	65
4.2 Voltage input test	67
4.3 Relay conduction test	67
4.4 Shock test.....	68
CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS	70
5.1 Conclusions	70
5.2 Recommendations	71
GLOSSARY	72
REFERENCES	73
APPENDIX.....	75
CURRICULUM VITAE.....	88

LIST OF FIGURES

	Page
Figure 1 Example of inrush current without pre-charge (Munari & Schneer, 2020)...	16
Figure 2 Creo Parametric 3D Modelling Software logo (PTC, 2022b).....	16
Figure 3 eCADSTAR 3D PCB Design Software logo (CADSTAR, 2022).....	17
Figure 4 Sample of printed circuit board	18
Figure 5 A high power diode manufactured by Vishay®	19
Figure 6 Various types of transistors	20
Figure 7 Various types of chokes.....	21
Figure 8 Mounting procedure	26
Figure 9 Demounting procedure	26
Figure 10 General methodology	26
Figure 11 Placement of interfaces and operating element in design concept (Pre-charging unit)	28
Figure 12 First plate for PCB mounting (Pre-charging unit).....	29
Figure 13 Main board mounted with combi screws M3 on the first plate of chassis ..	30
Figure 14 Second plate of chassis (Pre-charging unit)	30
Figure 15 MOSFET mounting position on second plate (Pre-charging unit).....	31
Figure 16 Front side of circuit board without chassis or third plate (Pre-charging unit)	32
Figure 17 Front side of circuit board with chassis or third plate (Pre-charging unit)...	32
Figure 18 The third plate and back side for locking all plates using six-point shape screw (Torx) with size M3 (Pre-charging unit)	33
Figure 19 The upper part of electrical diagram of pre-charging unit that consist of fuses, filters, protection, buck stage, and output	33
Figure 20 Main board.....	35
Figure 21 The bottom part of electrical diagram of pre-charging unit that consist of auxiliary supply, microcontroller, and connector as an output	36
Figure 22 Connector Board.....	36
Figure 23 Microcontroller Board	36

Figure 24 Auxiliary Supply Board.....	37
Figure 25 Complete view of electrical diagram of pre-charging unit.....	38
Figure 26 Example of opto-coupler implementation between microcontroller circuit and connector board	39
Figure 27 Pre-charge sequence using pre-charge unit	39
Figure 28 Location of saturation state observed using an oscilloscope.....	43
Figure 29 B-H magnetization curve of ferrite material.....	44
Figure 30 Thermal test and test setup	44
Figure 31 EER core.....	46
Figure 32 Measurement using multimeter for old version choke	47
Figure 33 Result of the simulation for old version choke.....	48
Figure 34 Visual result of saturation distribution for old version choke	48
Figure 35 B-H loop from old version choke during the test with 6.5 A peak current .	49
Figure 36 Voltage measurement using oscilloscope for old version choke.....	49
Figure 37 Current measurement using oscilloscope for old version choke	49
Figure 38 Result of the simulation for new version choke after modification	51
Figure 39 Visual result of saturation distribution for new version choke.....	52
Figure 40 Measurement using a multimeter for new version choke.....	53
Figure 41 Voltage measurement using oscilloscope for new version choke	54
Figure 42 Current measurement using oscilloscope for new version choke.....	55
Figure 43 STM32F105xx series offers two types of size	56
Figure 44 STM32L072xx offers more in various size.....	56
Figure 45 PCB layer build for pre-charging unit	57
Figure 46 aluminum sheet A5052.....	58
Figure 47 SUS430.....	58
Figure 48 B-H loop from old version choke during the test with 6A current.....	62
Figure 49 B-H loop from old version choke during the test with 6.3A current.....	62
Figure 50 B-H loop from old version choke during the test with 6.5A current.....	63
Figure 51 B-H loop from new version choke during the test with 5A current	63
Figure 52 B-H loop from new version choke during the test with 5.5 A current	64
Figure 53 B-H loop from new version choke during the test with 6.5 A peak current	64
Figure 54 Line chart of heat measurement (old version choke)	66
Figure 55 Line chart of heat measurement (new version choke).....	66

LIST OF TABLES

	Page
Table 1 Pre-charging unit specification from German Federal Ministry.....	23
Table 2 The materials used for pre-charging unit.....	41
Table 3 Project timeline plan.....	61
Table 4 Measurement result for old version choke.....	65
Table 5 Measurement result for new version choke.....	65
Table 6 Result from voltage input test.....	67
Table 7 Result from relay conduction test.....	67
Table 8 Shock test result.....	68