

# DETECTION OF BRANCH FAILURES IN THE ROTATING RECTIFIER OF A BRUSHLESS EXCITATION SYSTEM

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# CONTENTS

## **1.Introduction to the project**

1.1 Need for a branch failure detector

1.2 Structure of the brushless excitation system that uses the detector

1.3 Rotating rectifier

## **2. Branch failure detection principles**

2. 1 Types of failures

2.1.1 Inoperative of Diode

2.1.2 Breakdown of Diode

2.2 Boosts of field current harmonics

2.2.1 Normal operating condition

2.2.2 One branch failure

2.2.3 Two branches failure

2.2.4 Short circuit of one branch

2.2.5 Line- line short circuit

2.2.6 Line-neutral short circuit

2.3 failure detection criterion

## **Construction of the detector**

3.1 Overall arrangement

3.2 Detector circuit.

3.2 .1 Band pass filters

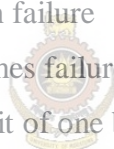
3.2.2 Peak detector

3.2.3 Comparator

3.2.4 Logic circuit

3.3 Application notes.

3.3.1 Tuning of the detector



## **Conclusion.**

**Appendix A** : Line currents in 3- phase un controlled rectifier under normal operation and branch failure conditions. 20

**Appendix B** : Harmonics on exciter field due to 3-phase rectifier failure conditions and due to system external faults.

## **References**



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## PREFACE

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This research is about the principal of operation and the construction of a detector circuit to identify the branch failure conditions in the rotating diode bridge of a brushless excitation system. Brushless excitation is used in high-speed synchronous generators.

The principal of detection is based on the harmonics present in the exciter field current. Different failure conditions give different contents of harmonics. By identifying harmonics it is possible to interpret the type of fault..

The circuit that detects exciter harmonic following a failure in a diode branch gives an alarm or indication. This circuit can be applied to any brushless excitation system.



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# CONTENTS

---

	<b>Page</b>
<b>1.Introduction to the project</b>	
1.1 Need for a branch failure detector	1
1.2 Structure of the brushless excitation system that uses the detector	1
1.3 Rotating rectifier	2
<b>2. Branch failure detection principles</b>	
2.1 Types of failures	3
2.1.1 Inoperative of Diode	
2.1.2 Breakdown of Diode	
2.2 Boosts of field current harmonics	3
2.2.1 Normal operating condition	
2.2.2 One branch failure	
2.2.3 Two branches failure	
2.2.4 Short circuit of one branch	
2.2.5 Line-line short circuit	
2.2.6 Line-neutral short circuit	
2.3 Failure detection criterion	10

### 3. Construction of the detector

3.1 Overall arrangement	11
3.2 Detector circuit.	12
3.2.1 Band pass filters	
3.2.2 Peak detector	
3.2.3 Comparator	
3.2.4 Logic circuit	
3.3 Application notes.	17
3.3.1 Tuning of the detector	

### 4. Conclusion.



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19

<b>Appendix A :</b> Line currents in 3- phase uncontrolled rectifier under normal operation and branch failure conditions.	20
--	----

<b>Appendix B :</b> Harmonics on exciter field due to 3-phase rectifier failure conditions and due to system external faults.	26
---	----

### References

29