

UNIVERSITI TEKNOLOGI MARA
KAMPUS BUKIT MERTAJAM
2003

FINAL REPORT OF DIPLOMA PROJECT

FACULTY OF ELECTRICAL ENGINEERING



FUSE SAVER

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ABSTRACT

We are very interested about FUSESAVER that we choose from our discussion and researched it. FUSESAVER using for testing electronic equipment, to spare ourselves some frustration and can save the unit's overworked fuses with a simple electronic fuses substitute that can be set to handle operating current ranging from 0.5 to 5 ampere without breaking a sweat. From that, we comprised of a quad op-amp , a general-purpose transistor, a pair of step-down transformers, a few diodes, and other support component. The FUSESAVER designed to monitor current through the device under test and remove power from the device when its current exceeds a preset level.

The FUSESAVER is a convenient electronic fuse substitute that clip to the fuse connection of the device under test (DUT). With its circuit-breaker-like operation, the FUSESAVER replaces the existing (and possibly soon-to-be-blown) fuse. It can save our loads of frustration, not to mention money and wasted time driving around buying fuses. The FUSESAVER is sample enough to be built using point-to-point wiring. It was designed around only the most common , readily available parts. In fact, our probably have many of the parts in our junkbox right now. And if we don't have all the parts on hand, everything (except the optional etched and drilled printed circuit board) can be purchased from our local Radio Shack outlet.

The FUSESAVER places a SPDT relay in series with the device under test (DUT) to control AC power to the load. At the same time, a monitoring circuit is connected to the device under test (DUT) to the sensor to current flowing through the unit . If the current flowing through the device under test (DUT) rises above pre-determined level, the FUSESAVER disconnect the device under test (DUT) from the AC power

source. To accomplish that , the FUSESAVER used the relay's normally-open contacts, which is inherently safer than using the normally-closed contacts. The normally-closed contacts can allow current to flow through the device under test (DUT) unexpectedly. Because of that feature, we can leave the FUSESAVER connected to the device under test (DUT) even when it is off. The FUSESAVER has six preset current ranges, extending from 0.5 to 5 amperes, that are made available through a 6-position rotary switch. (other current ranges can be added to or substituted for those provided with a little experimenting and switch with more contacts). The actual current setting can adjusted to any level within that range. Since a recent study revealed that over 17% of U.S. fuse sales are electronic fuses, now is a good time to learn how an electronic fuse works by building the FUSESAVER for our test bench.

ACKNOWLEDGEMENT

ALHAMDULILLAH....

Firstly, thanks to Allah for blessing we to finish this KEU 380 project. This book could not have emerged in its present form without the helpful suggestions made by many people during its preparation. We would like to express our sincere gratitude to our instructor or supervisor , **ENCIK ZAKARIA HJ.HUSSAIN** for his lecture and insightful explanation about this project, also for his immeasurable contributions to this project.

We would like to extend our appreciation to the many people who helped in completion of this project. We also grateful to all our friends with their helps. And also to our family for their support and give me the inspirations to settle this project. We also wish to thank the following reviewers who offered many helpful from the beginning of this project for their supporting and contributions. Without them maybe this project cannot be successful complete.

A big appreciation for our supervisor (En.Zakaria), family and friends for being such "good eggs" about the project, even if it did mean that we disappeared for hours on end in order to work on it. For their encouragement and assistance, we thanks our fellow faculty members and students. For turning our ideas into reality, we thank the folks at University Technology of Mara Penang, especially Encik Zakaria, and to all members for their comment and helps. Also, we'd like to thanks to the various IC and equipment manufacturers for providing pertinent data sheet schematics, and photographs.Finally, we'd like to thank the following reviewers for their constructive comments on the early manuscript.

THANK YOU VERY MUCH....

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