THE DESIGN OF THE DETECTION FOR A LONG SERIES OF MANUAL SWITCHES

A Project Report Presented In Partial Fulfillment Of The Requirements For The Award Of Advanced Diploma In Electrical Engineering (Electronics) Of Mara Institute of Technology

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A C K N O W L E D G E M E N T

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T h a n k Y o u

A B S T R A C T

The purpose of this project is to design and build an electronic circuitry to detect any bad switches (open contact) in a system that consists of 182 switches (expandable) connected in series with in the pigeon-hole cabinet.

In real fact , a black box is required to test a long series of manual switches (whether it is open or close)in one go.

T A B L E O F C O N T E N T S

1.Ø : I N T R O D U C T I O N

1.Ø.1 : *P O Q SYSTEM*

A Just-In-Time (JIT) warehouse has been established in order to do business with the company top-ten customers, JIT facility required that all product ship to them in designated `Preferred Order Quantities ´ (POQ) .

Preffered Order Quantities is shipping product in full boxes which is required from each manufacturing site. Product is packed in POQ to support the JIT warehouse. A POQ system was *designed locally for residual management which consists of* computer terminal, bar code scanner and pigeon-hole cabinet.

Software package was developed to control the important decision making in determining lot and quantity to be combined and also product location. All POQ product will be packed and residuals from each lot will be stored in the POQ cabinet. This cabinet has 182 doors (expandable) which is computer controlled to ensure elimination of mix device. This POQ system is using a poka-yoke concept (error proof system)