

NO VOLT CUM PULSE TESTER

Mr.R. Somasundaram¹, Ajay V², Jagadheeskumar M³, Bharathmagan M⁴

¹Assistant Professor, Department of Electronics and Communication Engineering, Adhiyamaan College of Engineering, Krishnagiri District, Tamil Nadu, India.

²⁻⁴U.G Scholars, Department of Electronics and Communication Engineering, Adhiyamaan College of Engineering, Krishnagiri District, Tamil Nadu, India.

somasundaram.ece@adhiyamaan.in¹, teejayajay98320@gmail.com², Jagadhoni4@gmail.com³, maganbharath@gmail.com⁴.

ABSTRACT: A fighter aircraft, regularly alluded to just as a warrior, is a military fixed-wing airplane planned principally for aerial battle against another airplane. The key exhibition highlights of a warrior incorporate its capability as well as its high velocity and mobility comparative with the objective airplane. Sukhoi 30mki is a super-flexibility twin-fly air predominance contender created by Russia's Sukhoi and worked under permit by India's Hindustan Aeronautics Limited (HAL) for the Indian Air Force (IAF).

KEYWORDS: Mobility comparative, super flexibility, twin fly, Sukhoi

I. INTRODUCTION

Force supply circuit are developing persistently and their dependability getting more significant than any other time. The intricacy of the entire organization contains various segments that can fizzle and intrude on the force supply for end client. For the greater part of the overall worked low voltage and medium voltage conveyance lines, a few issues are as follow-on flight stream motor engines. A High-speed engine, particularly squirrel confine acceptance engine is entirely dependable machine. The plan of this engine empowers the machine to work in different unpleasant conditions. It might encounter different flaws/unusual conditions. The different deficiencies incorporate stator flaws, rotor shortcomings and bearing issues. Every one of these shortcomings have their own eventual outcomes. These eventual outcomes might be dangerous to the engine if the shortcoming is supported for quite a while. In this manner it turns out to be vital to clear a shortcoming when it happens. So, we need to have a framework that distinguishes the shortcomings and separates the engine from supply the when they happen. An enlistment engine is for the most part named as a steady speed engine. In any case, under certain conditions it is important to change the speed of the engine so it very well may be utilized for different applications. Consequently, we likewise need to have a speed control framework with the goal that a solitary engine can be utilized for more than one application. This undertaking manages new technique for

single stage flaw recognition and furthermore Auto turning dependent on Arduino showed over the speed. Our identification framework manages the current moving through links. Each link will have its most extreme current limit. At the point when short out deficiency happens, current abruptly increments. Likewise, if there should be an occurrence of open circuit, current will be zero. Current transformers are utilized to distinguish current level, this yield current will be given to I to V converter unit in order to make in clear as far as voltage. This voltage is then taken care of two ADC pin of Arduino, which convert it into computerized and make a proper move if any flaw condition (SC or OC) happens. This shortcoming is shown on LCD show and on LEDs. Transfer driver and hand-off circuit is utilized to switch single stage heap of engine driver power circulation framework on other alright stage to give end client a continuous force supply. Shortcoming clearing switch is accommodated physically enlighten the framework regarding deficiency clearing. At that point just burden will be changed to standard stage.

II. RELATED WORKS

- [1] With a thought towards diffuse optical transmission, an adjusted technique was proposed to decide the heartiness of remote optical correspondence framework considering the presence of any deterrents in the predetermined work volume
- [2] The creators here proposed a nature of connection assessing asset allotment plot in which WBANs are utilized as an exertion towards augmenting the general organization effectiveness and performance. The proposed work comprises of two layers—transient connection quality estimation and sub-channel allotment among the wide scope of accessible WBANs. As an essential work, the creators predicted the connections among various parts of connection quality. In view of the information effectively accessible about associated connect characteristics, the sub-channel portion layer veers the accessible data transmission

into a few sub-diverts to keep up the nature of administration of the organization.

III. EXISTING METHOD

In the already existed method, there is a danger to decide the shortcoming point along the transmission line. And furthermore, can't ready to discover the flaw area. This prompts disadvantages like a regular difference in equipment and surprisingly more terrible it prompted a deficiency of human lives.

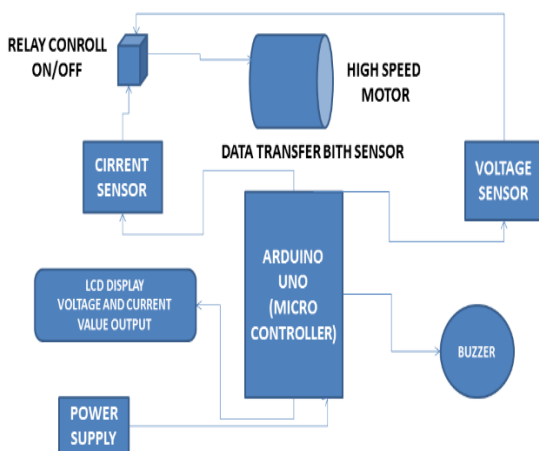
IV. PROPOSED SYSTEM

In the proposed framework, with the use of IoT (sensors) and installed framework, the overhead transmission line is checked by remote organizations and the assurance of the issue in the line become simple. This made a quicker recuperation rate, maintain a strategic distance from more regrettable mishaps and the arrangement is truly possible.

A versatile drive relationship channel (AICF) was utilized to channel the nose which was incited in the procured ECG signal. The AICF was used to compute the determinant flags, and depicted improved execution in mirroring the basic signs, contrasted with other recently utilized strategies, of gathering averaging.

V. BLOCK DIAGRAM

Current Sensor distinguishes the current in a wire or transmitter and creates a sign relative to the identified current either as simple voltage or computerized yield. At the point when current courses through this copper conduction way it produces an attractive



BLOCK DIAGRAM FOR NO VOLT CUM PULSE SYSTEM

Fig. 5 Block Diagram

One of the significant purposes behind power misfortune and harm to influence move gear is because of transmission line shortcoming. At the point when a line flaw happens in provincial India it is assessed to take around seven hours to be re-established while significant part time is taken to find the specific area of the deficiency since there is no effective way to find the shortcoming definitely. There are three methods because of which a flaw may happen when voltage more prominent than wanted voltage is sent or when voltage lesser than wanted voltage is communicated or when no current streams between any two focuses in a transmission line. In the proposed framework every one of this line flaw issues are tended to autonomously. Arduino UNO microcontroller goes about as the cerebrum of this framework where in it controls the working of the whole framework. Voltage sensor, current sensor and temperature sensor is utilized to continually quantify the voltage, current and temperature separately. The framework is modified so that any variety passing the upper and lower boundary of these key boundaries will be promptly educated to the concerned power board with the end goal that safeguards can be embraced to forestall harm or control any further harm. These alarm messages can be sent using GSM. Web of Things can be utilized to acquire live status of the blame and can be utilized to slice of force supply to the influenced area.

ARDUINO UNO R3

Arduino Uno R3 is Microcontroller board based removable, double in line bundle ATmega328 AVR microcontroller. It has 20 advanced info/yield pins (of which 6 can be utilized as PWM yields, 6 simple information sources), a 16 MHz resonator, a USB association, a force jack, an ICSP header, and a reset button. It contains all that expected to help the microcontroller; just interface it to a PC with a USB link or force it with an AC-to-DC connector or battery to begin. This is third form of Uno (R3), which has various changes that is USB regulator chip changed from Atmega8U2 (8k glimmer) to ATmega16U2 (16k flash) this doesn't build the blaze or RAM accessible to portrays, second is three pins were added, which are all copies of past pins. Furthermore, the reset button is currently close to the USB connector, making it more open when shield is utilized.

CURRENT TRANSFORMER

The Current Transformer (C.T.), is a sort of "instrument transformer" that is intended to deliver a substituting current in its auxiliary winding which is relative to the current being estimated in its essential. Flow transformers decrease high voltage flows to a much lower esteem and

give a helpful method of securely observing the genuine electrical flow streaming in an AC transmission line utilizing a standard ammeter. The head of activity of a fundamental current transformer is somewhat unique in relation to that of a common voltage transformer.

16X 2 LCD MODULES

16x2 LCD is named so in light of the fact that; it has 16 Columns and 2Rows. There is a great deal of blends accessible like, 8x1, 8x2,10x2, 16x1, and so forth yet the most utilized one is the 16x2 LCD. In this way, it will have (16x2=32) 32 characters altogether and each character will be made of 5x8 Pixel Dots. Working Voltage is 4.7V to5.3VCurrent utilization is 1mA without backdrop illumination Alphanumeric LCD show module, which means can show letter sets and numbers Consists of two lines and each column can print 16characters. Each character is worked by a 5x8-pixel box Can deal with both 8 - touch and 4-cycle mode It can likewise show any exceptionally produced characters Available in Green and Blue Backlight.

VI. EXPERIMENTAL RESULTS

The short out limit setup was tried. A current constraint of 50A was arranged utilizing a current and voltage detecting on miniature regulator. The current worth set was shipped off the Arduino uno in the LCD 16X2 Display with the notice ready sign for engine shortcoming discovery. image before the digits This was executed by driving up the framework and associating a heap with current rating surpassing the pre-set restriction of 700W roughly. To test, an electric iron gadget was utilized, as it had a befitting flow rating of 1000W. The framework stumbled off after the short out flaw was forced on the framework. Consequently, affirming the test for shortcoming discovery and exchanging framework (transfer) functionalities with notice alert.

S/N	Measurement	Voltage type (AC or DC)	Theoretical value (Volts)	Actual value (Volts)
1	Voltage divider input for voltage sensor	DC	12	12.02
2	Voltage sensing output for voltage sensor	DC	0.0099	0.010
3	Voltage divider input for current sensor	DC	12	11.08
4	Current sensing voltage output	DC	0.0909	0.092
5	GSM module power input	DC	4.4	4.2

Table. 6.1 shows the output and input voltage readings of each unit.

S/N	Measurement	Voltage type (AC or DC)	Theoretical value (Volts)	Actual value (Volts)
1	From the Mains	AC	220	214
2	After Stepping down	AC	12	11.2
3	After rectification	DC	12	11.8
4	After regulation	DC	5	5.08

Table. 6.2 showing discrete voltage readings of the power unit.

VII. FUTURE SCOPE

In future after adjustments should be possible, in next certain years GSM administration can be included this framework to know Consumer, when deficiency happened. The flaw is consequently recognized yet by expanding this we can naturally clear the flaw in future. In Future any issue happens can be auto remedied. So, mishap occurs because of wire deficiency can be diminishes.

VIII. CONCLUSION

In this task, the shortcomings are identified Using Arduino Uno R3 and furthermore message is shown on LCD. There is one Arduino UnoR3 used to recognize the issue like over current, high voltage, low voltage, additionally regulator is utilized to switch the transfers. Transfers are utilized to work supply to turn off all the heaps if there should arise an occurrence of short out. When there is short out in the circuit then current transformer is utilized to identify and

control the heap. Current transformers are utilized to distinguish current level, this yield current will be given to I to V converter unit in order to make in meaningful as far as voltage. This voltage is then taken care of two ADC pin of Arduino, which convert it into advanced and make a fitting move if any deficiency condition (SC or OC) happens. This flaw is shown on LCD show and on Leisurely driver and hand-off circuit is utilized to switch single stage heap of city power dispersion framework on other alright stage to give end client a continuous force supply. Deficiency clearing switch is accommodated physically inform the framework regarding flaw clearing. At that point just burden will be changed to normal stage.

REFERENCES

- [1]. Zoolnasri Bin Abu Harun, University Malaysia Pahang, "Over Current Protection Relay Using PIC Micro Controller", Project report. PP 1-24
- [2]. "Microcontroller based fault detection", International Journal of Advancements in Research & Technology, Volume 1, Issue 5, October-2012 1 ISSN 2278-7763
- [3]. Fault detection and protection of induction motors using sensors", 2008, Ramazan Bayindir, Ibrahim Sefa, İlhami Colak, and Askin Bektas
- [4]. M. E. H. Benbouzid, "Bibliography on induction motors faults detection and diagnosis," IEEE Trans. Energy Convers., vol. 14, no. 4, pp. 1065-1074, Dec. 1999.
- [5]. Anderson PM. Analysis of faulted power systems. New York (USA): IEEE; 1995.
- [6]. "INDUCTION MOTORS - PROTECTION and STARTING by VIV COHEN" Circuit Breaker Industries, P.O. Box 881, Johannesburg 2000, South Africa.
- [7]. Muhammad Ali Mazidi, Rolin D. McKinlay, Danny Causey "PIC Microcontroller and Embedded system using Assembly and C for PIC18".
- [8]. Pooja Shinde, Rupali Burungale, Pooja Kale, Purvee Jain, "Speed Control Of Induction Motor By Using Variable Frequency Drive", Rupali Burungale Et Al Int. Journal Of Engineering Research And Applications, Vol. 4, Issue 4 (Version 8), April 2014, Pp. 35-37.