



Patent Search

Invention Title	OVERVOLTAGE AND UNDER VOLTAGE PROTECTION, NOTIFICATION USING ML AND IOT- BASED SYSTEM.
Publication Number	10/2022
Publication Date	11/03/2022
Publication Type	INA
Application Number	202231004894
Application Filing Date	28/01/2022
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	ELECTRICAL
Classification (IPC)	H02P0009100000, H02H0003200000, H01T0001140000, H02H0009000000, H02H0003000000

Inventor

Name	Address
AYES CHINMAY (ASSISTANT PROFESSOR)	Department of Centre for Data Science, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India, 751030.
Dr. M PALA PRASAD REDDY (ASSOCIATE PROFESSOR)	Institute of Aeronautical Engineering Hyderabad, India.
Prof.(Dr.) B.K. SARKAR (INTERNATIONAL PATENT MOTIVATIONAL SPEAKERS)	GEH Research, New Mumbai, MH, India.
Mr. PAWAN KUMAR SINGH	GEH Research, New Mumbai, MH, India
Dr. M. PADMA LALITHA (PROFESSOR & HOD, EEE)	Department of EEE, Annamacharya Institute of Technology and Sciences (AITs), Rajampet-516126, Kadapa, Andhra Pradesh, India.
Dr. U. RAMESH BABU (ASSISTANT PROFESSOR, EEE)	Dept of EEE, N B K R Institute of Science and Technology (NBKRIST), Vidyanagar, Nellore- 5: Andhra Pradesh, India.

Applicant

Name	Address
AYES CHINMAY (ASSISTANT PROFESSOR)	Department of Centre for Data Science, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India, 751030.
Dr. M PALA PRASAD REDDY (ASSOCIATE PROFESSOR)	Institute of Aeronautical Engineering Hyderabad, India.
Prof.(Dr.) B.K. SARKAR (INTERNATIONAL PATENT MOTIVATIONAL SPEAKERS)	GEH Research, New Mumbai, MH, India.
Mr. PAWAN KUMAR SINGH	GEH Research, New Mumbai, MH, India
Dr. M. PADMA LALITHA (PROFESSOR & HOD, EEE)	Department of EEE, Annamacharya Institute of Technology and Sciences (AITs), Rajampet-516126, Kadapa, Andhra Pradesh, India.
Dr. U. RAMESH BABU (ASSISTANT PROFESSOR, EEE)	Dept of EEE, N B K R Institute of Science and Technology (NBKRIST), Vidyanagar, Nellore- 5: Andhra Pradesh, India.

Abstract:

Our Invention "Overvoltage and Under Voltage Protection, Notification Using ML and IoT- based System" is a this invention presents a novel system to domestic loads from over voltage and under voltage in AC mains supply. The proposed system monitors the voltage and provides a breakpoint base voltage tripping mechanism and protects the load using Machine Learning. The proposed system consists of a tripping mechanism that monitors the according to the limits provided. A lamp load is used in this research work to test the effective working of proposed system. This invention proposes device designed to be integrated in smart environments based on Internet-of-Things technologies. The proposed system enhances electrical safety to power supply in case of fault events like leakage current, electrical arc, overcurrent or overvoltage and has been designed with the goal to be integrated like smart homes or smart cities for protecting the electrical equipment. The system also enables real-time monitoring and notification events through communication interface using a data concentrator architecture. This invention provides an extended description of the proposed system's design and the experimental validation results.

Complete Specification

DESCRIPTION OF THE INVENTION

Load decoupling circuit and power supply. For decoupling the heap a static SSR module SSP1A125BD Schneider Solid state transfer is utilized, having 300 V AC yield, and 25A greatest current, and for unbiased decoupling we have utilized a hand-off (RLY). Decoupling happens first for the stage and nonpartisan, while recoupling happens in the opposite request. The honesty of the SSR and the hand-off is being checked at gadget fire up and into activity.

The PS power supply is an exchanging MEAN WELL DR-15-12 stock with a 12V DC yield, 1.25A evaluated current and 85-264V AC supply voltage. The against overvoltage by the PSP (Power Supply Protection) circuit, comprising of a resistor associated in corresponding with a triac.

Under typical conditions, when the matrix voltage is under a most extreme worth, the µC initiates a triac to cut off resistor associated in series with point when the network voltage surpass the greatest worth, the µC deactivates the triac, prompting the resistor being interface in series with the point circulating the voltage between the resistor and the PS.

At the point when the network voltage gets back to ostensible worth, the µC orders the re-enactment of the triac. Plan and execution insurances will be given by the µC.

[View Application Status](#)



Terms & conditions (<http://ipindia.gov.in/terms-conditions.htm>) Privacy Policy (<http://ipindia.gov.in/privacy-policy.htm>)

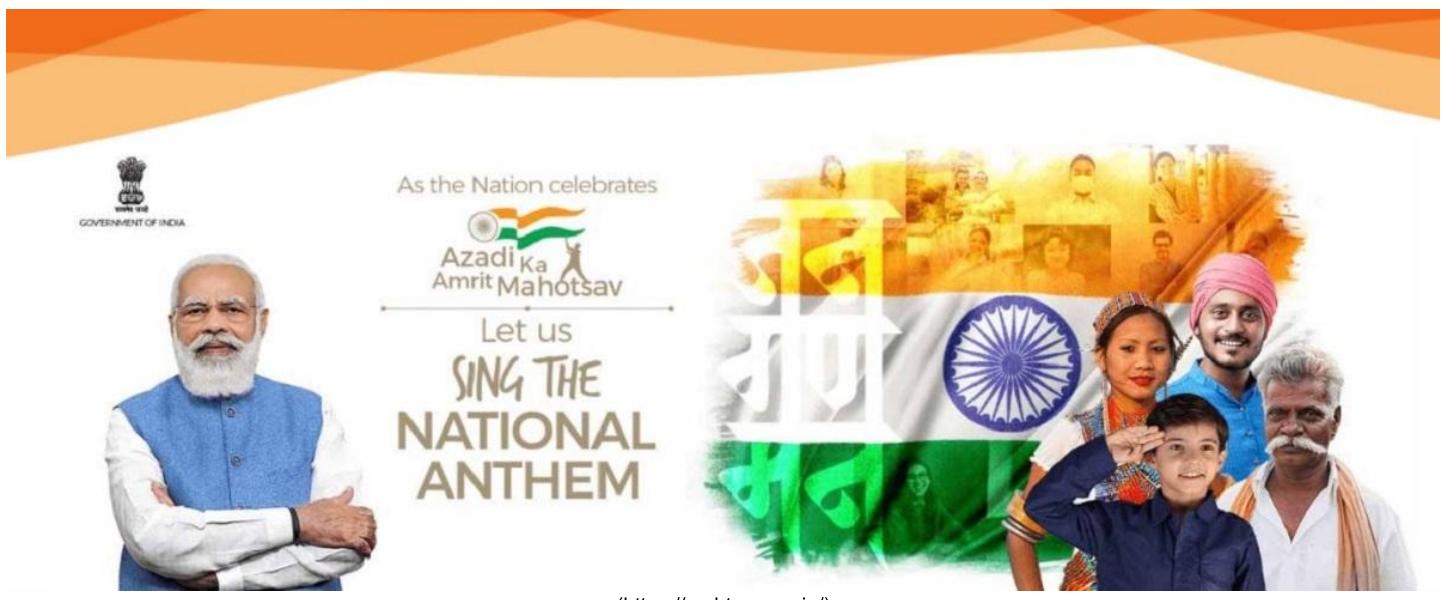
Copyright (<http://ipindia.gov.in/copyright.htm>) Hyperlinking Policy (<http://ipindia.gov.in/hyperlinking-policy.htm>)

Accessibility (<http://ipindia.gov.in/accessibility.htm>) Archive (<http://ipindia.gov.in/archive.htm>)

Contact Us (<http://ipindia.gov.in/contact-us.htm>) Help (<http://ipindia.gov.in/help.htm>)

Content owned, updated and maintained by Intellectual Property India, All Rights Reserved.

Page last updated on: 26/06/2019





Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

सत्यमेव जयते

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	202231004894
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	28/01/2022
APPLICANT NAME	<p>1 . AYES CHINMAY (ASSISTANT PROFESSOR) 2 . Dr. M PALA PRASAD REDDY (ASSOCIATE PROFESSOR) 3 . Prof.(Dr.) B.K. SARKAR (INTERNATIONAL PATENT MOTIVATIONAL SPEAKERS) 4 . Mr. PAWAN KUMAR SINGH 5 . Dr. M. PADMA LALITHA (PROFESSOR & HOD, EEE) 6 . Dr. U. RAMESH BABU (ASSISTANT PROFESSOR, EEE)</p>
TITLE OF INVENTION	OVERVOLTAGE AND UNDER VOLTAGE PROTECTION, NOTIFICATION USING ML AND IOT- BASED SYSTEM.
FIELD OF INVENTION	ELECTRICAL
E-MAIL (As Per Record)	dr.bksarkar2003@yahoo.in
ADDITIONAL-EMAIL (As Per Record)	dr.bksarkar2003@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	11/03/2022

Application Status

APPLICATION STATUS

Awaiting Request for Examination

[View Documents](#)

→ Filed → Published → RQ Filed → Under
Examination → Disposed

In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in