

(AUTONOMOUS)

(ESTD-1995) DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

<u>CO-PO Mapping of Project in area of Power Systems</u>

<u>**Title of the Project:**</u> Power Theft Identification System in Distribution Lines Using Differential Power Measurement

Area of the Project: Power System Applications

Methodology of the Project: Prototype Model.

Name of the Supervisor: Mr.E.Narasimhulu, M.Tech.

 Name of the Students:
 K. JOHN GILMOUR (18095A0214)

 G. ANJUM (17091A0203)
 T. CHANDRAVADHAN REDDY (17091A0212)

 CH. PRAKASH (18095A0226)
 M. SAI CHARAN REDDY (17091A0254)

 P. VENKATA VASANTH SAI (17091A0279)

Abstract:

Science and technology with all its miraculous advancements has fascinated human life to a great extent that imagining a world without these innovations is hardly possible. While technology is on the raising slope, we should also note the increasing immoral activities. With a technical view, "Power Theft" is a non-ignorable crime that is highly prevalent, and at the same time it directly affects the economy of a nation.

This project is designed to find out such power theft in the normal distribution lines. This project is using the principle of the differential protection scheme for the identification of the power theft. The differential protection scheme consists of two CTs (current transformers) connected at both the terminals of the load. If there is no fault in the load then the secondary currents of both the CTs will be same. Using the same principle one CT is connected at the starting end of the distributor and the remaining other CT is connected to the different loads which are legal. If there is no power theft in the line then the vector sum of all the CT's which are connected to the load will be equal to the current in the main CT. if there is a difference then we pan make out that it should either be the power theft or a fault in the line.



Head of Department Electrical & Electronics Engineering RGM College of Engineering & Tech. Nandyal-518 501,Kurnool(Dist) A.P Dr. T. JAYACHANDRA PRASAD M.E.Ph.D., FIE, FIETE, MNAFEN, MISTE, MIEEE PRINCIPAL R G M College of Engg. & Tech., (Autonomous) e NANDYAL-518501, Kurnool (Dt), A.P.

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Process of CO-PO attainment for Project thesis of IV-year Main Project

Course Outcomes:-

- 1. To identify the problem formulation of the project after literature survey or study of existing technology
- 2. To analyze the basic concepts of the project in correlation with the engineering knowledge
- 3. To apply the concepts of technology with modern tool usage to overcome the problem
- 4. To formulate the solution and to design simulation and prototype of the solution with the engineering knowledge.

CO-PO Mapping:-

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	-	-	-	3	-	-	-
CO2	2	-	2	-	-	-	-	-	3	-	-	-
CO3	2	-	-	-	-	-	-	-	3	-	3	-
CO4	2	-	2	-	2	-	-	-	3	-	3	-

Evaluation:-

Project	100	External evaluation	This end viva voce in project work for 100 marks
work	50	Internal evaluation	These 50 marks will be based on the performance of the student in the project reviews apart from attendance and regularity



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S. N O	REG	IM 50 M	EM gra de	TM 150 M	E M	%I M	%E M	CO 1	CO 2	CO3	CO4	N.C O1	N.C O2	N.C O3	N.C O4
1	18095A0214	49	10	143	94	98	94.0 0	25.5 7	31.5 7	19.04 7	19.04	95.9 1	94.71	95.2 4	95.2 4
2	17091A0203	47	10	143	96	94	96.0 0	25.3 1	31.8 3	19.04 7	19.04	94.9 1	95.51	95.2 4	95.2 4
3	17091A0212	46	9	128	82	92	82.0 0	23.1 8	27.9 7	17.04 96	17.04	86.9 2	83.92	85.2 5	85.2 5
4	18091A0226	46	10	143	97	92	97.0 0	25.1 7	31.9 7	19.04 7	19.04	94.4 1	95.91	95.2 4	95.2 4
5	17091A0254	41	9	128	87	82	87.0 0	22.5 1	28.6 4	17.04 9	17.04	84.4 2	85.92 2	85.2 5	85.2 5
6	17091A0279	43	9	128	85	86	85.0 0	22.7 8	28.3 7	17.04 9	17.04	85.4 2	85.12	85.2	85.2 5

Table: Percentage Weightages for each CO

Table: Weightage marks for each CO

	CO1	CO2	CO3	CO4
INTERNAL	40	20	20	20
EXTERNAL	20	40	20	20
AVERAGE	26.664	33.33	19.99	19.99

Table: Percentage Attainment Values for each CO

		Co1		C02			C03		Co4
Above & Equal 60%	6	3	6	3		6	3		6 3
Between 40-60%	0	2	0	2		0	2		0 2
Below40%	0	1	0	1		0	1		0 1
Total students	6		6			6			6
Attainment value		3.00		3.00			3.00		3.00
% of attainment and		100.00		100.00			100.00		100.00
Charlined or not (GREATER 50% Y,NOT MEALS N Head of Department		Y		<i>Dr. T.</i> Y		AC			RASAD
Control + Electrical & Electronics Engineering RGM College of Engineering & Tech. Nandyal-518 501,Kurnool(Dist) A.P	•		 •	R G M	Co (AL-	Pl elle Au 518	RINCIPA ge of Eng tonomô 501, Kuri	L gg. ୧ ଜଣ୍ଡ nool	k-Tech., (Dt), A.P.

POWER THEFT IDENTIFICATION SYSTEM IN DISTRIBUTION LINES USING DIFFERENTIAL POWER MEASUREMENT

A Main project report submitted in partial fulfilment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY IN

ELECTRICAL AND ELECTRONICS ENGINEERING Submitted by

K. JOHN GILMOUR	(18095A0214)
G. ANJUM	(17091A0203)
T. CHANDRAVADHAN REDDY	(17091A0212)
CH. PRAKASH	(18095A0226)
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P. VENKATA VASANTH SAI	(17091A0279)

Under the Esteemed Guidance of

Mr.E.Narasimhulu, M.Tech.

Assistant Professor in Dept. of E.E.E

RGMCET



(ESTD-1995)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

RAJEEV GANDHI MEMORIAL COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

(Affiliated to JNTU- Anantapuramu, Approved by AICTE-New Delhi, Accredited by NBA-New Delhi, Accredited by NAAC of UGC with 'A+' ' Grade) NANDYAL-518501, KURNOOL (DIST.), A.P.



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2017-2021

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TECHNOLOGY (AUTONOMOUS)

NANDYAL-518501, KURNOOL (DIST.), A.P.



(ESTD-1995)

BONAFIDE CERTIFICATE

This is to certify that the thesis entitled "POWER THEFT IDENTIFICATION SYSTEM IN DESTRUCTION LINES USING DIFFERENTIAL POWER MEASUREMENT" that is being inteed by K. JOHN GILMOUR (18095A0214), G. ANJUM (17091A0203), T. NDRAVADHAN REDDY (17091A0212), CH. PRAKASH (18095A0226), M. SAI CHARAN DY (17091A0254), P. VENKATA VASANTH SAI (17091A0279) have carried out the main prior for the fulfilment of the award of Bachelor of Technology in Electrical and Electronics interior in Rajeev Gandhi Memorial college of Engineering & technology(Autonomous) and this is a record of bonafide record of the work done by them during the year 2020-21.

Head of the Department

2 19/7/21. fedd (PED, M Dr.V. Say Professor

Dept. of FEE, RGMCET

rnal Examiner: Signature Date: 20 4 51

Project Guide

E. Mr.E.Narasimhulu.stran

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