

### 7.1.2: Response

The Institution has facilities and initiatives for the following

Sr. No	Description
1.	<b>Alternate sources of energy and energy conservation measures</b>
	<ul style="list-style-type: none"> <li>✓ Sensor-based Solar Street Lamps</li> <li>✓ Sensor-Based Lighting-Utilization of Passive Infrared Sensor (PIR)</li> <li>✓ Timer-Based Exhaust Fans.</li> <li>✓ Use of LED Tube lights/bulbs.</li> <li>✓ Star Ratings Air Conditioners (3 to 4)</li> <li>✓ Brushless Direct-Current (BLDC) Motor Fans</li> </ul>

Our institution is committed to adopting alternate sources of energy and implementing effective energy conservation measures. To achieve this, we have incorporated the following solutions:

**Sensor-Based Solar Street Lamps:** We have installed solar street lamps equipped with advanced sensors. These sensors allow the street lamps to detect ambient light levels and adjust their illumination accordingly.

**Sensor-Based Lighting Utilizing Passive Infrared Sensor (PIR):** Within our facilities, we have integrated sensor-based lighting systems that utilize Passive Infrared (PIR) technology. These sensors detect motion, ensuring that lights are automatically turned on when needed and switched off when no activity is detected.

**Timer-Based Exhaust Fans:** To further enhance our energy conservation efforts, we have implemented timer-based exhaust fans. These fans are programmed to operate at specific intervals or during designated hours to maintain optimal indoor air quality while minimizing energy consumption during non-peak periods

Our institution has taken significant steps to implement alternate sources of energy and energy conservation measures. For instance, we have integrated sensor-based lighting and power systems, along with timer-based exhaust fans, which enable us to optimize energy use and minimize wastage effectively.

Recognizing the importance of energy-efficient equipment, we emphasize the use of power-efficient devices and LED tube lights/bulbs. This not only helps in conserving energy but also





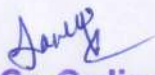
**Dr. D. Y. Patil Pratishthan's College of Engineering  
Salokhenagar, Kolhapur**

leads to a substantial reduction in electricity bills, demonstrating our dedication to both environmental stewardship and cost-efficiency.

In terms of air conditioning, we have chosen energy-efficient air conditioners with star ratings ranging from 3 to 4. This strategic decision reflects our commitment to reducing energy consumption, even in larger systems like air conditioning, which typically have a significant impact on energy use.

Moreover, we acknowledge the benefits of Brushless DC (BLDC) motor fans. These fans are known for their exceptional energy efficiency and extended lifespan compared to traditional motor fans. By adopting BLDC motor fans, we are taking another step towards achieving our energy conservation goals.

In conclusion, our institution is actively and diligently pursuing alternate sources of energy and energy conservation measures. Through practical initiatives and thoughtful choices in equipment and technology, we are working towards a more sustainable future while setting an example for others to follow.

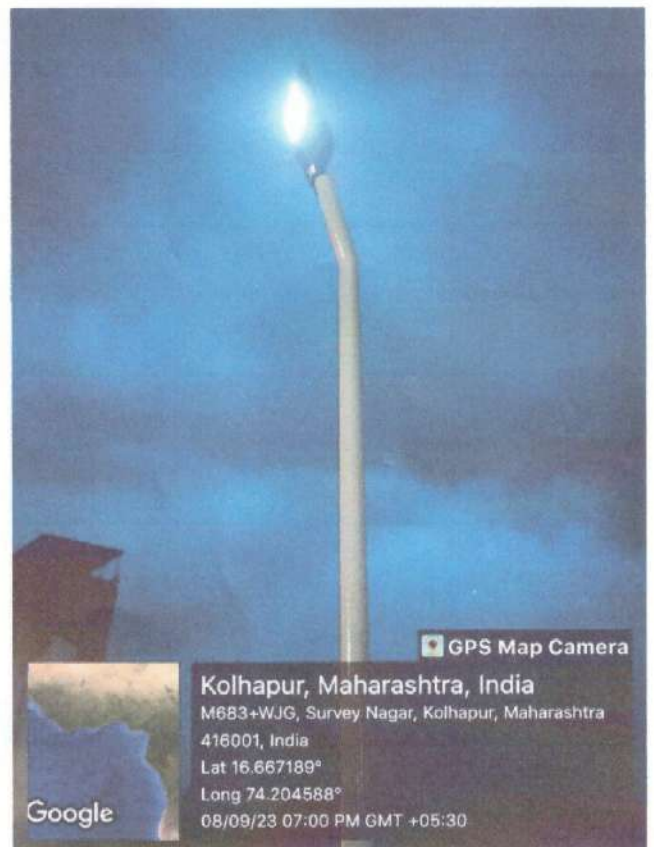
  
**IQAC Co-Ordinator**  
Dr. D. Y. Patil Pratishthan's  
**College of Engineering**  
Salokhenagar, Kolhapur.



  
**PRINCIPAL**  
Dr. D. Y. Patil Pratishthan's  
**College of Engineering**  
Salokhe Nagar, Kolhapur.

7.1.2: Response

1. Alternate sources of energy and energy conservation measures.



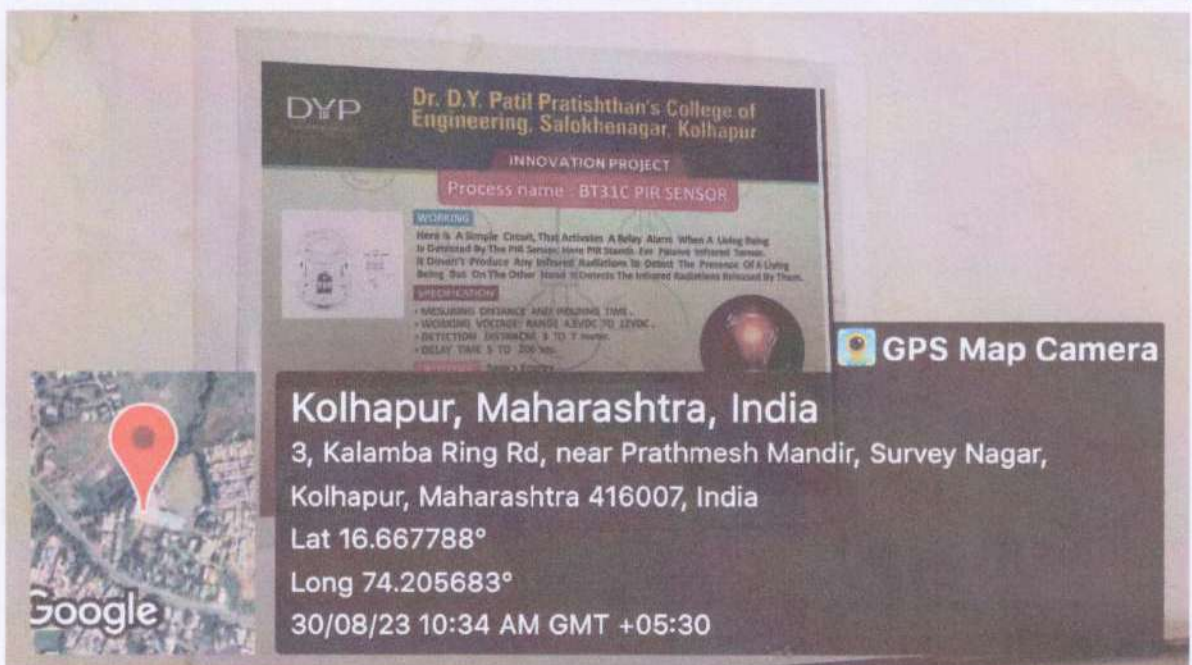
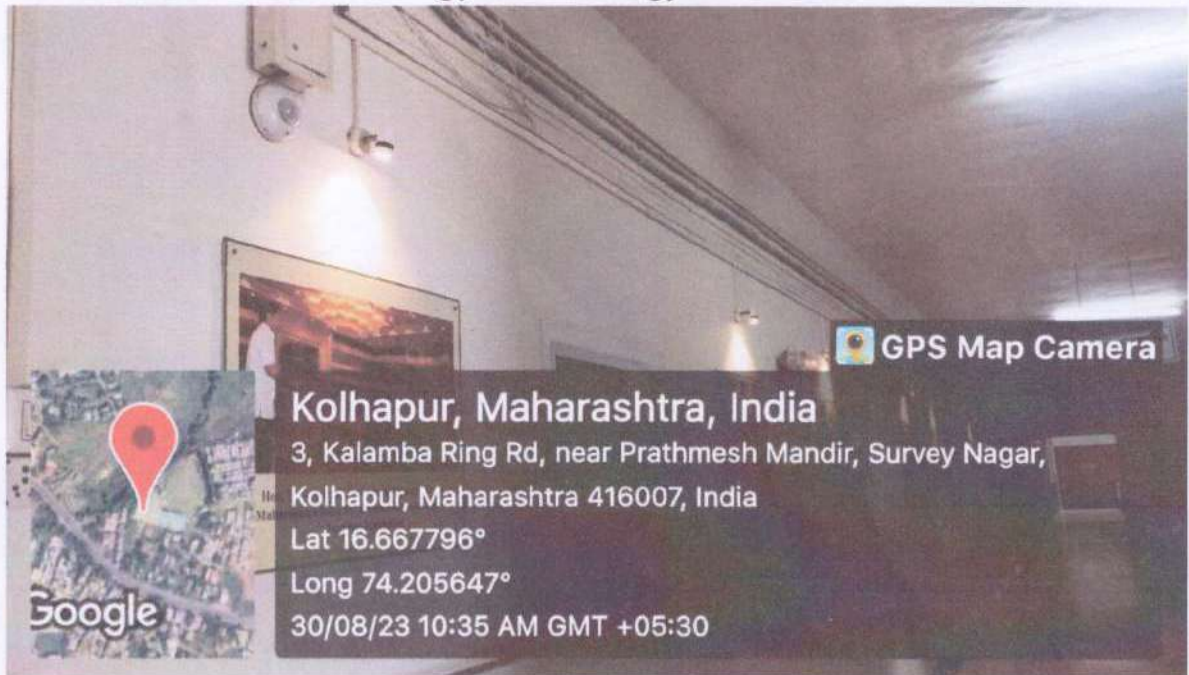
Sensor-based Solar Street Lamps



  
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College of Engineering  
Salokhe Nagar, Kolhapur.

7.1.2: Response

1. Alternate sources of energy and energy conservation measures.



Sensor-Based Lighting-Utilization of Passive Infrared Sensor (PIR), near Panini Hall

Date:23/01/2021

## PIR SENSOR for Energy Conversion

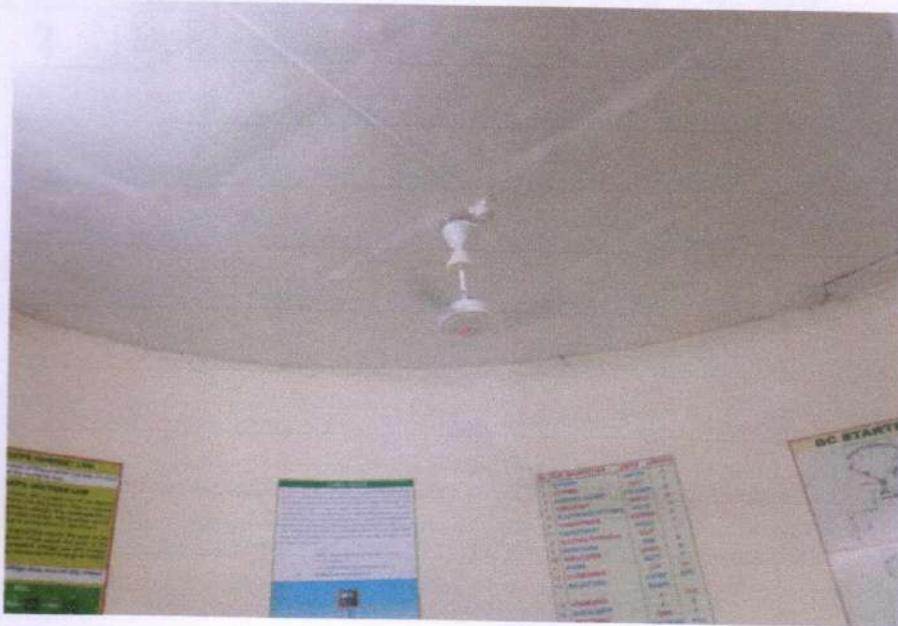


**Summary: 360 Degree PIR Motion sensor with light sensor with energy saving, motion detector switch BT31C was installed in corridor near to the Panini Hall to monitor the drop lights fitted on the Event holdings. It is sensible to say one unit of energy is equivalent to 2 Units of generation. To achieve this we realized the above with the involvement of the student group of energy conservation.**

*Ashyansh*

Date: 11/02/2021

## Remote Operated Fan Model for Energy Conservation



**Summary:** It was proposed to implement the remote control of fan for varying speed using IR sensor In the Lab No 108.The Fan Speed can be varied as per the needs of the user using remote sensor. This was successfully installed along the students Participation

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**Dr. D Y Patil Pratishthan's College of Engineering, Salokhenagar Kothapur**  
**PROCESS Report** File:

Form 2

Elaboration: Energy Saving project (Lighting control by Sensors)		<b>/Research/</b>	
Dept: ELEECTICAL	Project by <b>Prof Dr V.P.Kallimani</b>	File: ELE/<Research>/<File><No>/SI No/Date	
Process Name: PIR sensor Installation	In charge <b>Prof Sanjeev Deshpande</b>	Status: 100(FULLY) (Percentile completion)	
Outcome: Energy Saving	End date: 21/11/2020		
	Head :		
	Start date:20/11/2020		
	Cost: Rs.600(Approx)		

**Summary:** PIR (PASSIVE INFRA RED) Sensor BT31C was brought on 20/11/2020. On 21/11/2020 it was tested and calibrated and commissioned near the PANINI HALL entrance. The objective of this sensor is to switch ON/OFF the drop LEDs fitted over the Event Posters. Whenever any moving object comes in the vicinity (12-14feet) the LEDs will be switched ON. Timer is being set for 1min(approximately). So the LEDs will be switched OFF after the set time provided no other moving object crosses during this interval of time. The use of this sensor will certainly optimize the electricity used by the LEDs. It's an ENERGY SAVING INNOVATIVE IDEA.

**About the process: Commissioning of the PIR Sensor**  
**Cost of Project: Rs 2000**

**Outcome: Energy Saving**

**Points to observe: Proper operation & Energy Saving**

*Deshpande*  
 Staff In charge 23/11

*Deshpande*  
 HOD 23/11

*Shirani*  
 Principal 24/11/20

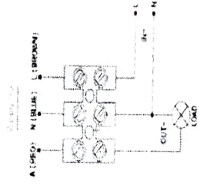
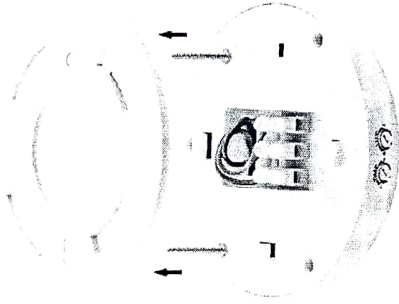
Campus Co-Ordinator

Photo Gallery<with titles and statements>

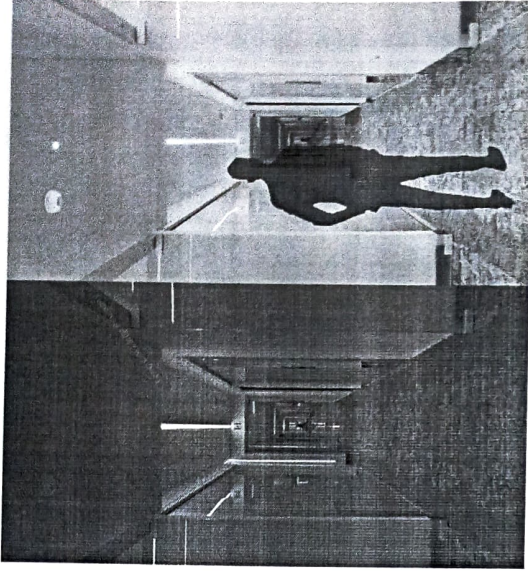


PIR SENSOR

BT31C  
360 Degree PIR Motion  
Sensor with Light Sensor,  
Energy Saving Motion  
Detector Switch



CONNECTION DIAGRAM



An Illustration





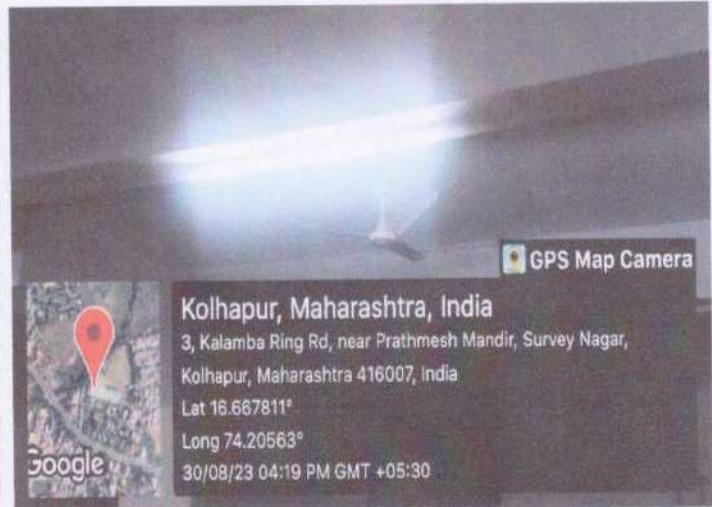
**Star Ratings Air Conditioners (3 to 4)**



**Brushless Direct-Current (BLDC) Motor Fans**



Timer-based Exhaust Fans



Use of LED tube lights/bulbs