



Infrared Wall-mount Thermal Touch-less Detector for Automatically Detecting Persons with Elevated Body Temperature

INDIA'S FIRST EVER COVID19 SAFETY DEVICE-
NUOS IR TOUCHLESS THERMAL SCANNER

Detects elevated body temperature

FEATURES

- Detects elevated body temperature
- Touchless
- Plug and play
- Sound and light indication
- Battery less
- Results under one second



The touchless IR Thermal Scanner needs to be installed at the entrance or outside the home door or at the entrance of societies, offices, medical facilities, schools, etc. The Scanner uses an IR thermal sensor to detect the body temperature of a person. When a person walks in front of the scanner, the scanner need not be touched by the person and he/she is automatically detected using the infrared thermal sensing if he/she is standing within 10 cm of the scanner using our in-built distance sensor. If the detected body temperature is within the normal body temperature of 33°C to 37°C, then the buzzer beeps once. If it's between 37°C to 41°C it detects that the person is sick and beeps the buzzer for 3 secs as well as actuates the output relay 3 times which could be connected to a hooter/doorbell/automated door system, etc, alarming the persons inside of a sick person outside. If the temperature is below 33°C or above 41°C then the scanner output remains inactive.

The installation does not need any civil work or rewiring. Fits in the existing space on a wall and needs to be plugged in a regular 110-230V AC socket.

The main USP's of the product are as follows:

1. **No operator needed to operate the scanner.** Its wall-mount and Touchless - unlike the handheld thermal scanners. This removes the risk of the operator contracting the disease from an infected person and then re-transmitting to all the people getting scanned subsequently.
2. **Plug and Play** - Just Stick it on the wall at comfortable height and plug into a 110-240VAC power socket to power up.
3. **Completely Battery-less** - Avoids having to change batteries and run into additional costs and incorrect readings due to low battery. Works continuously.
4. **Has Relay Output** - Can be used to control automated doors to allow/disallow people based on their health condition.
5. **In-built Distance Sensor** - to avoid incorrect measuring distance and incorrect reading which is a possibility with a handheld scanner.
6. **Results under 1 sec** - For faster access control

Application Areas:

1. Government Buildings
2. Office Buildings
3. Private/Public Hospitals
4. Society Buildings
5. Restaurants
6. Malls



- 7. Movie Theatres
- 8. Police Stations
- 9. Individual Homes - As its actually in the same shape of a doorbell (All homes can replace their doorbell switch with the scanner and connect relay output to the home doorbell)
- 10. Any establishments which have people going in and out

Once the government decides to roll back the lockdown the rules may mandate establishments to have the thermal scanning for all persons entering their buildings/offices. This we believe is a product fit for the same requirement since it's completely touchless.

How is our scanner better than others in the market?

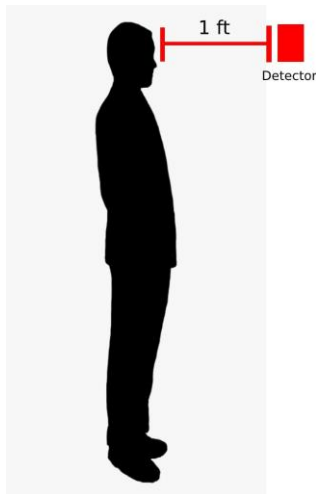
Present technologies include the IR thermal sensing handheld device which is supposed to be held against the forehead of a person and the device shows the temperature of the person's forehead.

The handheld scanner needs a person to be very close to the other person and can be at risk of contracting the disease from the scanned person. Also, the device is battery operated and can run out of battery. The device can be misplaced/lost. It is also expensive as ₹7,000-10,000/-

	NUOS Wall-mount IR Thermal Scanner	Handheld IR Thermal Scanners
Form Factor		
Training Requirements	No Training, auto human detection using in-built proximity sensor. Fully automatic product	Training for operator for holding distance, settings change and battery changing
Proximity	Inbuilt proximity sensor for avoiding	No proximity sensor. Incorrect

Sensing	false negative detection due to incorrect distance between scanner and person	distance of sensing could be possible resulting in false negative detection
Battery	Operated over 110-230VAC mains for continuous uninterrupted operation. Runs continuously over lifetime of the product	Battery life is limited to 300-400 readings and battery needs to be replaced. Cost of battery is a running expense for the device making the device overall expensive. (One battery pack cost ~ ₹150/-)
Human Intervention	No human operator needed. Device is fully automatic with automatic human presence detection for auto-scanning. Since no operator is needed, risk of transmitting the diseases to others is avoided.	Human operator continuously needed to operate the scanner

Detailed working



1. When no person is standing in front of the detector, the detector blue indicator LED stays on.
2. When a person with body temperature between 33°C to 37°C stands within 10 cm of the detector the blue indication LED starts blinking and the bell rings once.
3. When a person with body temperature between 38°C to 41°C stands within 10 cm of the detector the red indication LED starts blinking and the bell rings 5 times.
4. The detector is completely touchless and automatic.
5. When the person moves out from front of the detector the detector blue indicator LED again gets turned on and stays on.



Thermal Scanner Specification:

- Dimensions: H130 mm x L120 mm x D60 mm
- Weight: 250 g
- Measuring Range: 20°C to 45°C
- Measuring Accuracy: 0.2°C
- Sensing Distance: 10 cm max.
- Result Time: 1second
- Output Indication:
 - Light Indication: Blue LED blink for Normal person(34 to 37°C) and Red LED blink for Sick person (above 37°C)
 - Sound Indication: 1 sec Buzzer beep for Normal person and 3 sec buzzer beep for Sick person
 - Temperature display on 7 segment display
 - 2A Relay Dry Contact Output for driving doorbell, hooter, additional indicator light, control to automated door locks or entry access/turnstile systems.
- Power Consumption: 100 mW
- Power Supply: 85 – 265 V AC, 50 – 60 Hz, 1ph
- Operating Temperature: 20°C to 35°C
- Operating Humidity: 95%
- Certifications:RoHS, CE Class A Compliance (Self Declaration)
- Warranty: 1 Year

Installation:

The installation is very simple and does not need any civil work or rewiring. It's a plug and play device which just needs to be plugged in a 110-230V, 50-60Hz Power Socket to power on.

1. Unbox the package
2. Mount the Sensor on the wall with either screw or double sided Industrial tape provided in the package
3. Connect the adaptor to socket
4. Switch on the Socket
5. NUOS IR Touchless Thermal Scanner is ready to use



FAQ:

1. Where can I install NUOS IR Touchless Thermal Scanner?
 - a. NUOS IR Touchless Thermal Scanner can be installed at the entrance of societies, offices, homes, medical facilities, schools, restaurants, malls, parks etc.
2. How do I install the NUOS IR Touchless Thermal Scanner?
 - a. Our Installation process is very simple and easy. The scanner needs to be stuck on the wall at a comfortable height of an average human face either using the double sided tape or a screw provided with the product.
 - b. Then just plug the cord into a 110-240V, 50-60Hz power socket and the product will be instantly powered on.
3. Do I need a Battery to operate it?
 - a. No, NUOS IR Touchless Thermal Scanner does not require any battery. It operates over 110-230V mains for continuous uninterrupted operation and runs continuously over the lifetime of the product.
4. Do I need any person for its operation?
 - a. No, NUOS IR Touchless Thermal Scanner is totally Touchless and does not require any Human Intervention.
5. How does it indicate the result?
 - a. If the detected body temperature is within the normal body temperature of 34°C to 37°C, then the detector rings/blinks blue light once. If it's between 38°C to 41°C it detects that the person is sick and rings the buzzer 5 times/blinks red light, alarming a sick person.



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