

ThermoGate®

INFRARED BODY TEMPERATURE DETECTION SYSTEM



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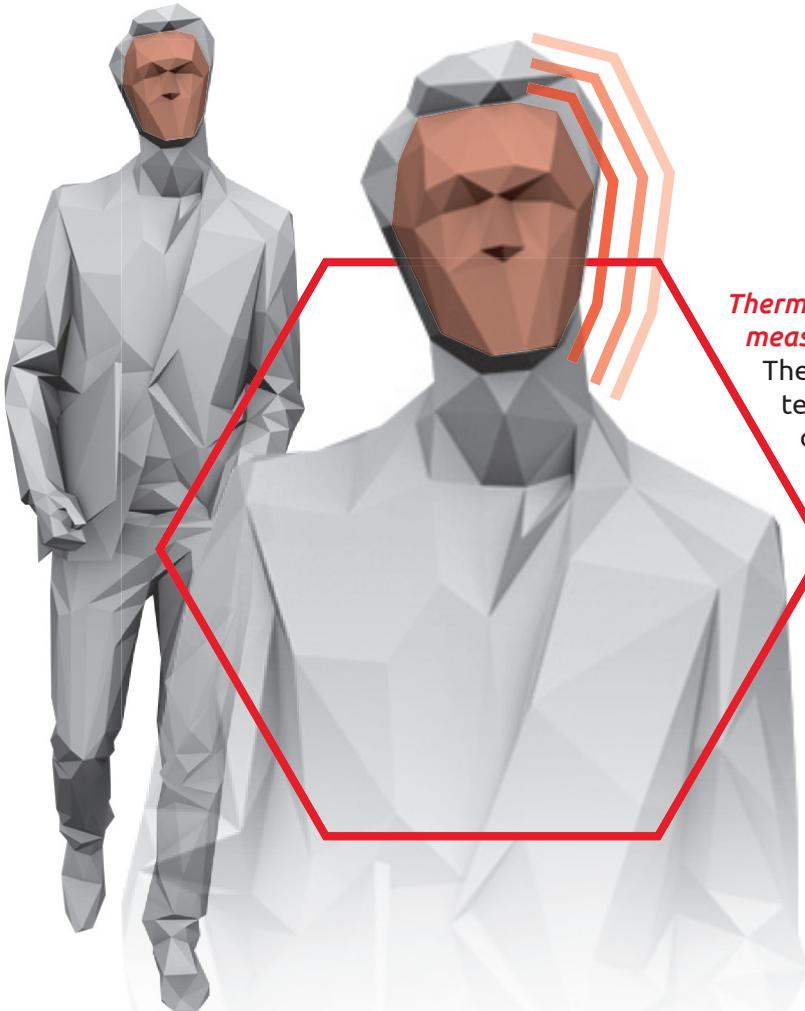
ThermoGate®, is 32-point precision IR thermometer designed for measuring the temperature of the human body and screening people who have fever. You just have to place it at the side of a door. When a person with body temperature over 38°C passes by, a red light and a beeper provide an alert.

"A smarter approach than thermal cameras to fever screening"

In comparison to thermal cameras ThermoGate® offers:

- Cost reduction (1/10th)
- Double absolute accuracy (0.5 °C vs 1°C - 2°C)
- Easy installation
- Simple to use, no technician needed
- Up to 1 meter working range (with no need of focusing)

In epidemic diseases such as coronavirus, the determination of body temperature is an important indicator of the virus where the density of personnel is high. The human fever measurement devices used in the market cause serious time loss in single measurements and ineffective controls are carried out. ASiS has developed ThermoGate® product. It provides psychological support for people entering the indoor area and prestige to your company.



ThermoGate® uses thermography method to measure by distance the human body temperature.

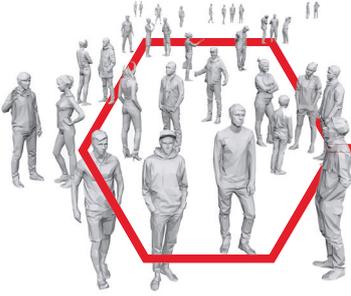
Thermography method needs to have the temperature reading of the hottest small area on the subject's face (usually not bigger than one cent coin). The same method is used by thermal cameras and by handheld infrared thermometers. ThermoGate® measures 32 such narrow areas in 1/20th of a second. As the person moves, passing in front of the instrument, hundreds of points are captured from his/her face while the person keeps walking. The maximum (after applying software algorithms) is displayed and is a pretty accurate reading ($\pm 0.5^{\circ}\text{C}$ body temperature accuracy is achieved when used indoors).

ADVANTAGES

Fast measurement on moving (walking) persons.
No need to stop people for measuring.



Measures up to 100 persons per minute.



High accuracy: $\pm 0.5^{\circ}\text{C}$

$\pm 0.5^{\circ}\text{C}$

The device is passive. It does not transmit any kind of harmful radiation. The system uses 32 infrared sensors concurrently. This way it is capable to measure the head temperature of a wide span of people, short and tall ones.



It does not require contact
(like an ear thermometer)



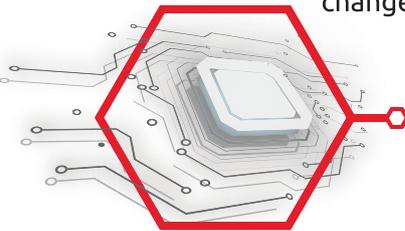
Measures people walking in both directions



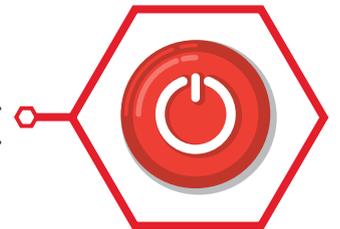
Accuracy is enhanced by processing of the sensors data by advanced algorithms for correctly predicting internal human body temperature by reading the head's skin temperature. The system performs automatically re-calibration for even slight change of environmental conditions.



The system uses very precise sensors made by one of the biggest manufacturers in optoelectronics in Europe



The system works immediately after turning it ON.
No initial calibration is required.



$36,5^{\circ}\text{C}$

The temperature of each passing person is read easily on a LED screen.

No personnel training is required, Easy installation, Reliability, Low cost



USAGE AREAS

It can be used easily in all entry points where there is human traffic such as factories, airports, shopping centers, business centers, markets, schools, hospitals, cinemas, restaurants.



FREQUENTLY ASKED QUESTIONS

Q: Is ThermoGate® emitting radiation in order to measure?

A: No. ThermoGate® only collects and senses the IR (infrared) radiation of the human body. (Infrared radiation is the heat in form of radiation, of course is not dangerous in any way). Other IR thermometers may emit a dangerous to the eyes laser beam for pointing

Q: What is thermography and how do IR (infrared) thermometers and thermal cameras work?

A: All objects emit infrared light (IR radiation) according to the temperature their surface has. This kind of light is invisible to human eye for objects in room temperatures. IR thermometers and thermal cameras measure this infrared light and deduce the object's temperature from distance. A human body's internal temperature can be deduced by the surface temperature of the person's face and the method is called "thermography". Thermal cameras work by measuring many thousands of pixels using different electronics and therefore have different specifications.

Q: What conditions does the thermography method require and how much accurate is it?

A: In order to get correct skin temperature (especially face) the following rules must be obeyed:

- The person's face must not be washed or wet shortly before the measurement
- The person must not be sweaty
- The person must not have body fatigue or had done body exercise shortly before the measurement. Human body is elevating the internal temperature when it is under fatigue in order to maintain better muscle activity. In that case there is a higher body temperature that is normal and not related to fever.
- The skin temperature is not always the same. It can vary a little (some tenths of Celcius) very rapidly, due to air flow or even due to psychological reasons.
- The person must not be in air flow, especially from air-conditioning
- The person must not be in environment where he/she is feeling cold and has very cold skin. Recommended conditions are +25°C to +32°C (7°F to 90°F). If a person comes from an outside environment that is cold then he or she must remain indoors for enough time as to have the face skin warmed again.
- If the person wears glasses the reading might look less than the real temperature because glass is opaque to infrared light

All above have to do with body physiology and apply for the use of the ThermoGate® and for any thermal camera or IR thermometer as well.

Q: Is operation and maintenance of ThermoGate® easy?

A: Very easy. Operation instructions are all about turning the unit "ON" and then "OFF" by the main power button. Maintenance includes only wiping mirrors with clean cloth, whenever it gets dirty. Anyone can use and maintain it. Installation is very easy too and rarely requires a technician.

TECHNICAL SPECIFICATIONS

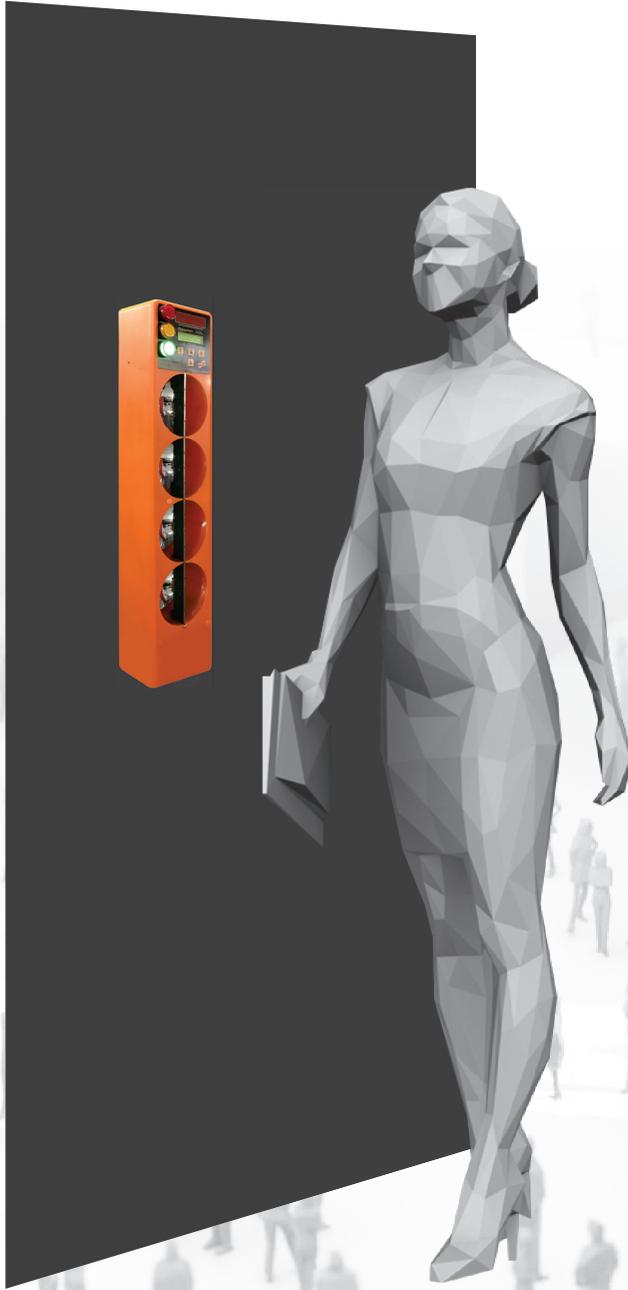
Precision	: $\pm 0.5^{\circ}\text{C}$ ($\pm 0.9^{\circ}\text{F}$) body temperature accuracy when used indoors under the recommended conditions
Resolution	: $0,1^{\circ}\text{C}$ ($0,2^{\circ}\text{F}$)
Working distance range	: 0 – 1 m
People measuring capacity	: 100 persons per minute passing by
Maximum height difference of measured people	: 70 cm approx
Environment operating temperature	: $+10^{\circ}\text{C}$ to $+38^{\circ}\text{C}$ ($+20^{\circ}\text{C}$ to $+32^{\circ}\text{C}$ recommended). Must not operate near heat sources or air-conditioning air flow
Maximum environment relative humidity	: %75
Beeper sound whenever measured temperature exceeds	: 38°C (100°F) for fever screening capability



Operating Voltage	: 12V DC from a regulated power supply (wall power supply provided)
Power consumption	: < 5 Watts (0.5A max current consumption, 0.1A typical)
Dimensions of instrument	: 76cm x 10cm x 15cm
Weight of instrument	: < 2kg
Dimensions of Aluminum Gate (for Advanced model)	: 1 x 2.2 x 0.2 m installed (2.3 x 0.25 x 0.25 packed)
Weight of Aluminum Gate (for Advanced model)	: < 20 kg

ThermoGate® STANDARD

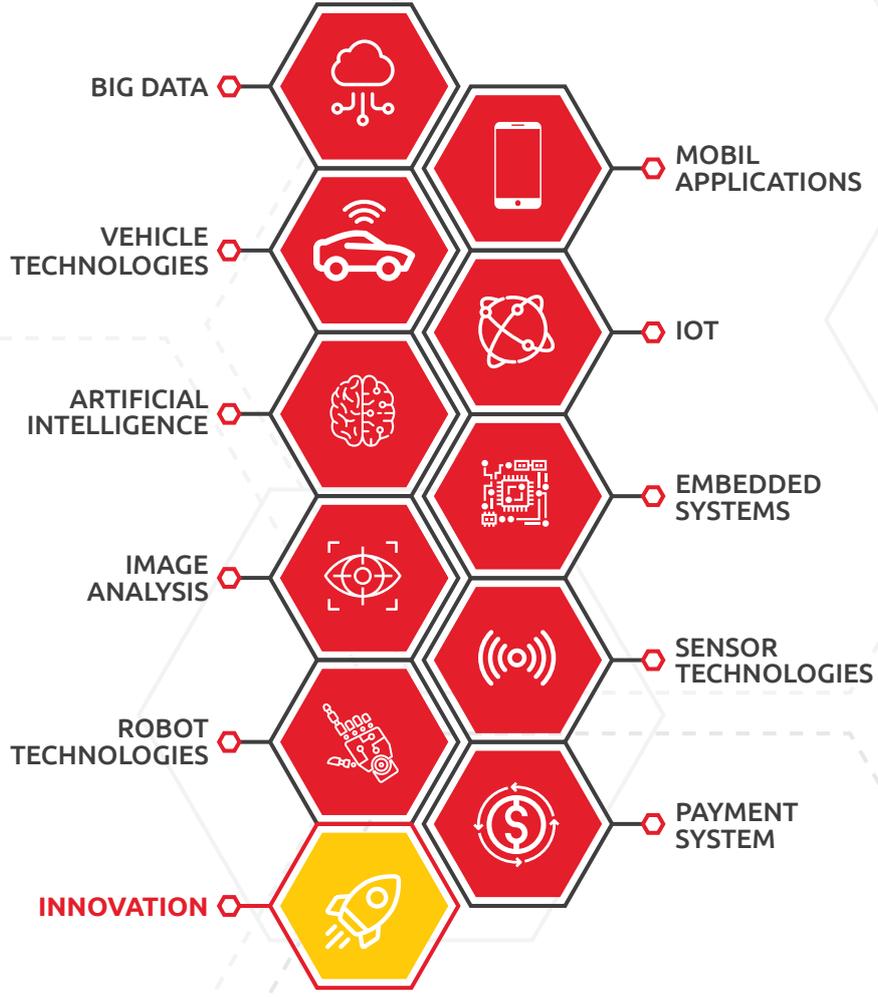
The instrument only. Just place it at the side of a door Beeps when a person who has fever passes by
(up to 1 meter range)



ThermoGate® ADVANCED

ThermoGate® standard and extruded aluminum door frame. Painting of aluminum is optional.
Breaks in 3 pieces Includes aluminum connecting sockets and flat base.
(Available upon request)





TAKE
CONTROL

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