Precautions and Safety Measures

Thermal Imaging and Temperature Detection Products

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English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.

For further details, please visit our Company's website www.zkteco.com.

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1 Introduction

This document describes the installation requirements and precautions which are to be followed while bringing the thermal imaging and temperature detection devices into operation. Please ensure to follow the precautions before using the products.

1.1 Installation Requirements

The installation requirements and indicators associated with the temperature detection is given below:

Specifications	Standard value	Remark
Operating Environment	Indoor, No wind, No direct light, 16°C to 35°C (60.8°F to 95°F)	The recommended operating temperature is 25°C (77°F)
Distance (between face and device)	30 to 120cm (0.98ft to 3.94ft)	The recommended distance is 80cm (2.62ft)
Measurement Accuracy	±0.3°C (±0.54°F)	This value is tested in a distance of 80cm or 2.63ft under 25°C or 77°F environment.

Notes: The temperature detection data is for reference only, and not for any medical purpose.

1.2 Installation Instructions

1. The device needs to be installed far away from any magnetic field equipment and it is suitable for indoor working environments (constant temperature). When testing indoors, please avoid direct light and avoid

installing the device in places where there is wind or large airflow such as air conditioning vents.

2. Do not focus the lens at strong light sources or high-temperature targets such as the sun and incandescent lamps, otherwise, it will cause damage to the lens or thermal imaging detector.

INDOOR USE

KEEP DISTANCE

AVOID GLASS REFLECTION

AVOID DIRECT SUNLIGHT EXPOSURE

The effective measuring angle of the temperature detection equipment is 25 degrees upward, downward, left, and right direction. Within this range, reflective objects/high-temperature heat sources should be avoided as much as possible. For example, glass, ceramic tile, metal, automobile, etc. The device's thermal imaging module can capture the reference objects within 10m. When the person crosses these reference objects and reaches the effective temperature detection distance, it is possible to detect the temperature of the reference body surface when the person passes the device in less than 0.1s, resulting in inaccurate temperature detection data. If the above situation exists, it is recommended that the person can stand in front of the device within the effective temperature detection distance for more than 0.5s to measure the temperature, so that the module can precisely capture the person's face and then measure the temperature accurately.

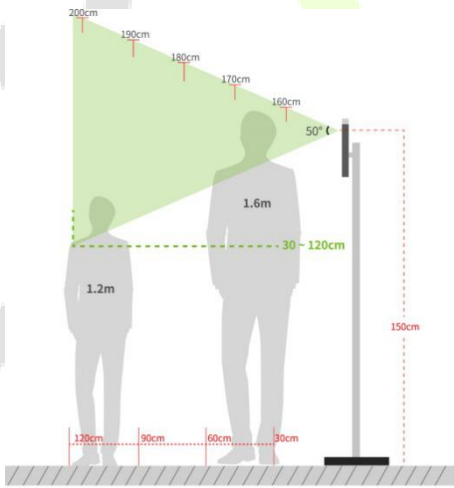
1.3 Operational Procedure

1.3.1 Temperature Detection Mode

Forehead Temperature Detection

The device requires that the face is projected in the recognition frame, and only the forehead of the face is selected as the reference point to read the temperature as the body temperature of the detected personnel.

At an installation height of 1.5m, the FOV (field of view) of the thermal imaging device is 50 degrees, and the temperature detection distance is 0.3m to 1.2m (in indoor constant temperature environment). The height of the face adapted for detection is 1.2m to 2m.

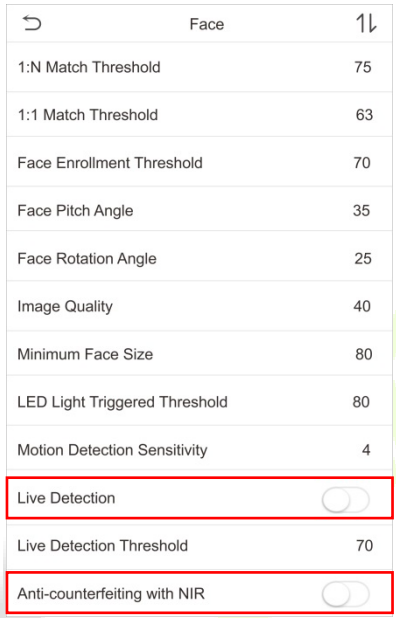


Recommended installation height: 150cm
Temperature Measurement Distance: 30cm~120cm

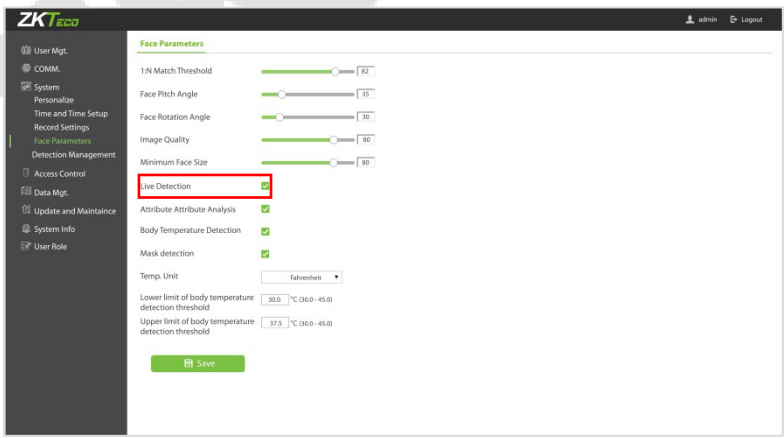
Note:

1. In this mode, the temperature detection module responds faster when detecting temperature. The device will first detect the temperature of the target, then check if the subject is wearing a face mask, and verify his/her identity by facial recognition.
2. The device supports alive body detection by default, and masked employees may be judged as fake faces by the device. This means that subjects wearing face masks might not be recognized all the time, or no faces are even detected much of the time (the probability of missed or unsuccessful identifications for users wearing black masks is higher), which will increase the entire recognition time. If there is no requirement for living body detection, you can disable this function on the menu.

Device Setting Interface

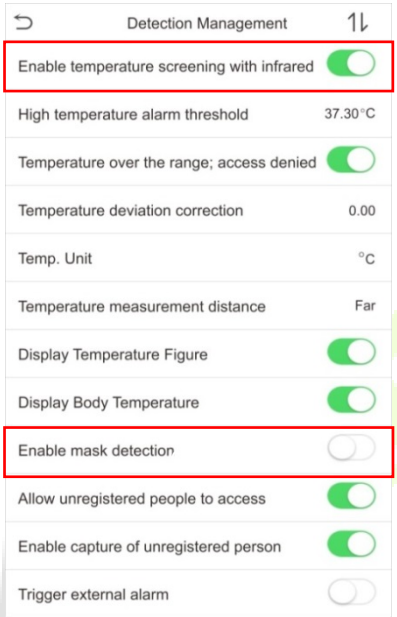


Webserver Setting Interface★

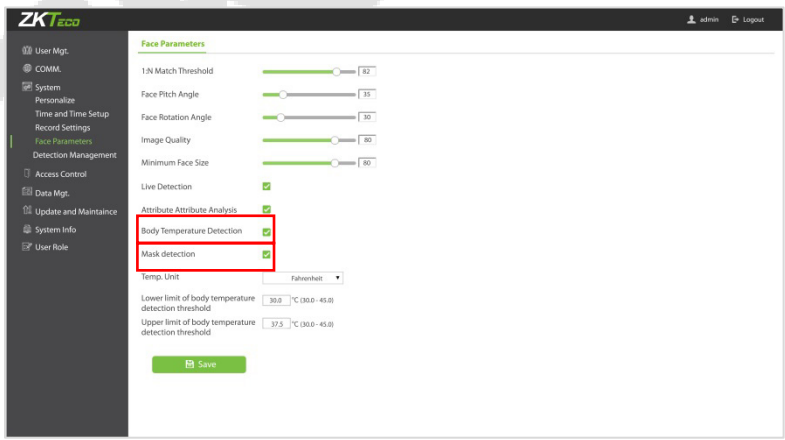


3. To measure the temperature more accurately, when the device is taken out from a place with low temperature or a large temperature difference for the first time, the device should be operated for a while to ensure that the temperature of the device and the current ambient temperature are unified, to avoid temperature difference. For example, after the device is taken out from the warehouse and installed, it is recommended to wait for more than 90 minutes after the device is powered on to ensure that the temperature of the device is unified with the current environment before detecting the body temperature.
4. After the device is normally powered on, it is forbidden to move the position of the temperature detection sensor, otherwise, it may affect the detection performance of the temperature detection module.
5. The device supports body temperature detection and mask detection. These functions can be enabled or disabled through the setting menu as shown below.

Device Setting Interface



Webserver Setting Interface★



Note: Not all the products have the function with★, the real product shall prevail.

The following situations may affect the performance of temperature detection:

1. The forehead must not be blocked by bangs during temperature detection, which will result in a deviation in temperature detection.
2. If the employee stands far away from the device, the temperature detection can be affected, and it results in inaccurate test value. The recommended distance is 80cm.
3. After strenuous exercise, it is not recommended to test because it will result in low-temperature detection value.
4. During the test, rain, fog, sunlight, and wind will affect the test results. So, the temperature detection environment should not block the lens with steam, dust, smoke, etc.

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