Precautions and Safety Measures

Temperature Measuring 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   <u>Safety Instructions</u>

The temperature measuring products use thermal-based infrared array of sensors. Hence, the installation and operating environment must be within the recommended range and away from any heat source. Otherwise, it will affect the infrared temperature measurement accuracy, resulting in temperature and operational abnormalities.

Please read the precautions before using the products.

The installation requirements and indicators related to the temperature measurement are given below:

Items	Standard value	Remark
Environment	Indoor, no wind 16 to 32°C(60.8 to 89.6°F)	At low temperature (2 to 16°C) and high temperature (33 to 40°C), the temperature measurement accuracy is low, and compensation is required
Distance (between face and device)	30 to 50cm(11.8 to 19.7in)	The recommended distance is 40cm (15.7in)
Measurement Accuracy	±0.3°C(±0.54°F)	This value is the result of testing under standard working environment

Notes:

1) The temperature measurement result of the device is only for a reference and cannot be used as a medical basis.

2) Due to infrared characteristics of the devices, in low-temperature environments, the temperature of the human body will be low, and the temperature measured by the device will be significantly lower than the normal body temperature. Therefore, it is recommended to perform low-temperature compensation at low temperatures. Conversely, in high-temperature environments, the body surface temperature will also be higher, and the difference between the ambient temperature and the human body temperature becomes smaller. So, it is recommended to compensate for high temperatures as well.

1.1   Installation instructions

Please follow the instructions carefully before installation.

Used indoors and in the environment of no wind with temperature between 16 ~ 32℃. Do not point the temperature measuring camera at direct sunlight or any high-temperature source.

INDOOR USE   KEEP DISTANCE   AVOID GLASS   AVOID DIRECT
                                           REFLECTION   SUNLIGHT
                                                                EXPOSURE

1. The effective temperature measurement range of the device is 60° up and down, left and right, and a coverage range of 1m distance.

Within this range, there should be no reflective objects. Such as glass, smooth tiles, metal, etc. The reflective objects must be places away at 5m from the product to avoid measurement errors.

2. Do not install multiple temperature measuring devices close to each other in the same direction. You need to form an angle to prevent light interference between the modules; ±60 degrees left and right, within 1m.

3. Users are advised to wait for a moment while taking a temperature measurement after coming out of the sun, or in a hot/cold room.

1.2 Operational Procedure

1.2.1 Temperature measurement mode

**Forehead Temperature Detection (System Default Mode)**

The device requires that the face must be inside the recognition frame, so the user is required to adjust the position of the face.
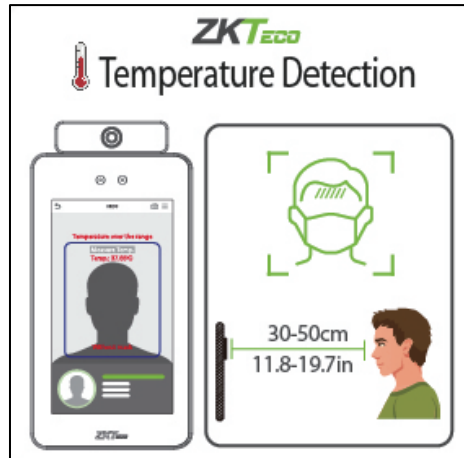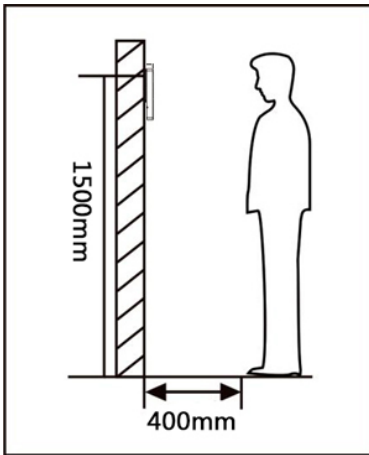
The recommended height range of the face from the ground is 1.5 to 1.7m. People who are taller than this height need to bend their knees for temperature detection. It is recommended to choose a suitable height based on the average height of the employees.

Notes:

1) It is recommended to adjust the product installation height according to the average height of the employees.
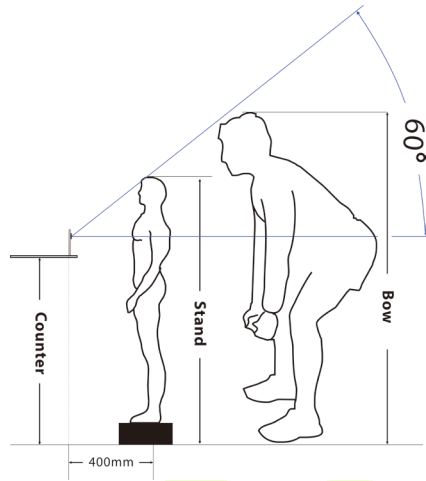
2) In this mode, the device will first detect the face, and then the temperature.

3) The device supports live detection by default, and employees with masks can be judged as false faces by the device (the probability of black masks is higher), which will increase the entire recognition time. If there is no requirement for live detection, you can turn off this function on the menu.

⮌	Face	⇅
1:N Match Threshold		75
1:1 Match Threshold		63
Face Enrollment Threshold		70
Face Pitch Angle		35
Face Rotation Angle		25
Image Quality		40
Minimum Face Size		80
LED Light Triggered Threshold		80
Motion Detection Sensitivity		4
Live Detection		⬭
Live Detection Threshold		70
Anti-counterfeiting with NIR		⬭

4) The device supports body temperature detection, mask detection, and it can be turned on and off through the function menu settings. If personnel verification is not required, you can also turn off the personnel verification function in the menu.

Palm Temperature Detection★

After the device is turned on, palm recognition and temperature detection are performed together. The device is easy to use. The temperature of the hand is relatively affected by rubbing the hand, holding hot or cold things, and hence the accuracy can be affected. For device installation, users with different heights can have better adaptability.
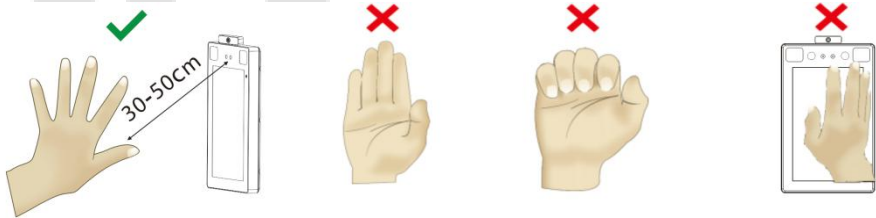
Note: Not all products have the function with★, the real product shall prevail.
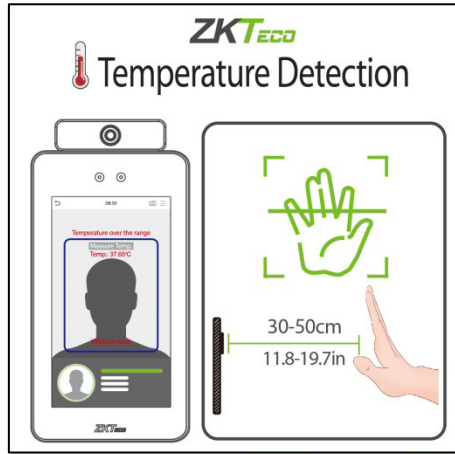
1. When the device is moved from one place to another with low-temperature or high-temperature difference, or when the device is installed and powered on for the first time, the device needs to work for some time to ensure that the temperature of the machine is consistent with the current temperature, and there is no temperature difference. For example, just install the device after taking it from the warehouse and wait for more than 30 minutes after the device is powered on to ensure that the temperature of the device is consistent with the current temperature.

2. After the device is normally powered on, it is not recommended to move the position of the temperature measurement sensor, otherwise, it may affect the detection accuracy.

The following situations may affect the temperature measurement.

1) The forehead must not be blocked by bangs during temperature measurement, which will result in a deviation in temperature measurement.

2) If the employee stands far away from the device, the temperature measurement can be affected, and it results in inaccurate test value. The recommended distance is 40cm.

3) Sweating on the forehead directly after will result in low-temperature value while testing.

4) The environment should not block the lens with steam, dust, smoke, etc., which will affect the temperature measurement and resulting in inaccurate value.