

How to Configure Temperature-Screening Handheld Thermal Cameras

1. General Parameters

- **Temperature Measurement Range**
30.0-45.0 Degrees Celsius
- **Temperature Measurement Accuracy**
± 0.5 Degrees Celsius
- **Camera Resolution**
DS-2TP31B-3AUF: Thermal: 160 × 120
DS-2TP21B-6AVFW: Thermal: 160 × 120, Optical: 640 × 480
- **Operating Environment**
Indoor environment with calm air condition; 10-35 Degrees Celsius

2. Installation

1) Installation Cautions

The performance of these temperature-screening solutions is greatly affected by their environment. These cameras are only suitable for indoor environments or scenarios with calm air and consistent temperature. The relative installation location of the devices also greatly affects the accuracy of temperature measurement. In order to improve measurement accuracy, the installation environment has to meet certain criteria:

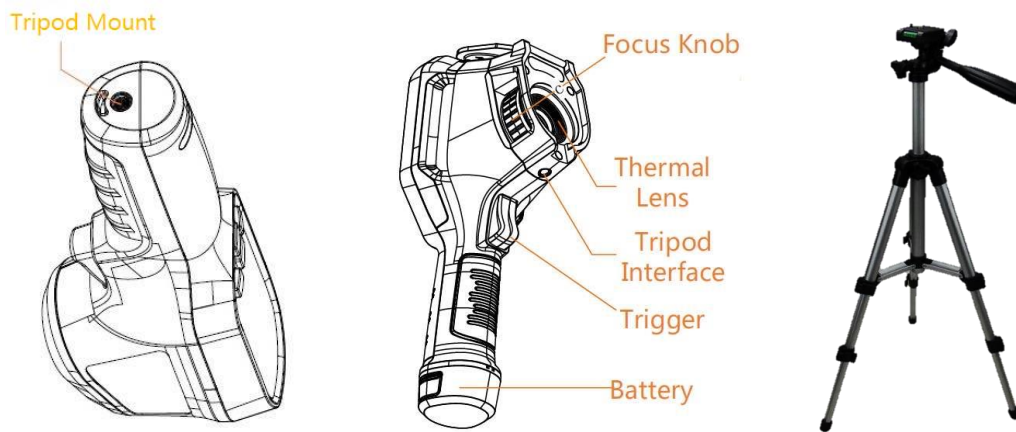
1. Select installation environments with a single-direction path to ensure that the camera captures the full faces of all passing persons. It is recommended for that people being screened stand still for a short time during measurement.
2. Select indoor environments with calm air and consistent temperature. Outdoor environments with rapid temperature changes are not recommended.
3. If this solution is used in entrances that connect indoor and outdoor environments (such as customs or security checkpoints), it is suggested that the camera is installed at a significant distance from the entrance.
4. Avoid placing objects with a high temperature in the scene.

2) Camera Installation

- The camera should be set in front of the one-direction path, capturing the full faces of passing persons, as shown below.



- It is recommended that the camera is installed at a height of 1.5-1.7m, the approximate height of human faces. Alternatively, it can be set to have a low elevation angle, thereby reducing errors caused by other heat sources near the ground.
- The recommended distance between the camera and the target depends on the model. For instance, the recommended distance for the **DS-2TP31B-3AUF** is 0.8-1.2m, whereas the recommended distance for the **DS-2TP21B-6AVFW** is 1-2m.
- Do not place objects that are hotter than human body temperature in the background of camera's view.
- This handheld thermal camera can be mounted on a tripod without extra adapters. HIKVISION offer a tripod for fixed placement, sold separately. As domestic suppliers have not fully restored production capacity, there are currently multiple suppliers resulting in slight differences between tripods of the same model, however, this will not affect their use.

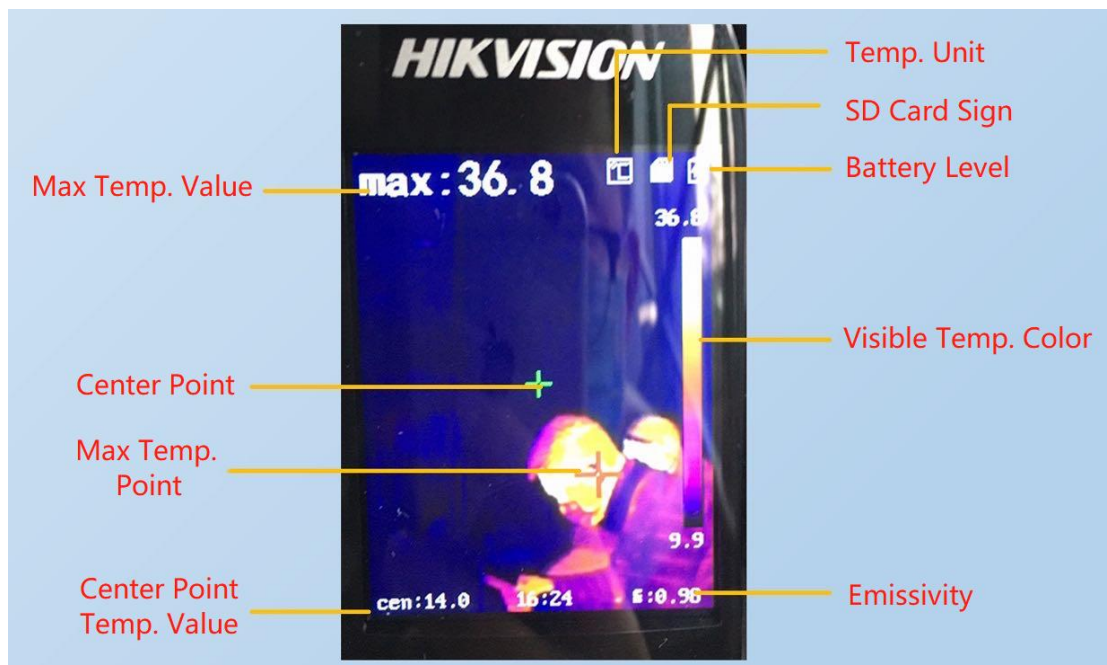


3. Configuration

DS-2TP31B-3AUF

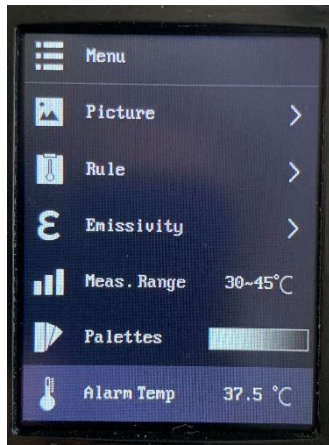
User Interface

The **User Interface** of this handheld thermal camera is as shown below.



Configuration Notes

1. It is suggested the **Alarm Temp.** is set at 37.5 degrees Celsius. Alternatively it can be adjusted to meet other requirements. When the measured value exceeds the set value, the displayed **Max Temp. Value** will turn red and flash as shown below.

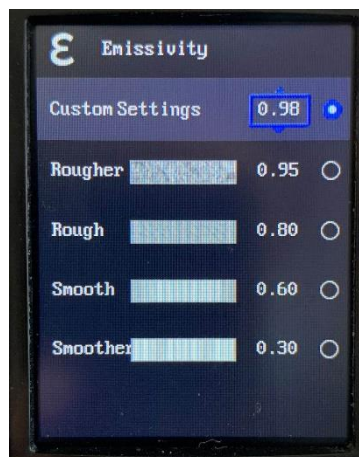


Normal Temp. Value: no Alarms



Abnormal Value: triggers Alarm

2. Set **Emissivity** to 0.98 for human skin thermography as shown below.



3. Set the **Distance** with using the actual distance between the camera and measured object. The recommended distance is 1-1.5m as shown below.



DS-2TP21B-6AVFW

User Interface

The **User Interface** of this handheld thermal camera is as shown below.



Configuration Notes

1. Go to **Settings >> Local Settings >> Thermography Settings**. Set the **Emissivity** to 0.98. Set the **Distance** using the actual distance between the camera and the measured object.



2. Go to **Thermography**, Set **Hot Spot**, **Center Spot**, and other rules as required.



3. Go to **Palettes**, Set **Alarm Temperature (Above)** as required. When the measured value exceeds the set value, the displayed **Max Temp. Value** will turn red and flash as shown below.



4. Adjust the Focus Knob and make sure the live view is clear during measurement.

4. Other Notes for Use

- Before this handheld device is used for body temperature measurements it

should run for 15 minutes to preheat.

- The measured human body temperature is same as the measured **Max Temp. Value**; make sure that the **Max Temp. Point** is on the human face in the camera view during measurement.
- This product is used for preliminary temperature-screening of people. If the alarm is triggered, a specialized medical thermometer should be used for further checks.
- All of the above descriptions about **Installation** and **Configuration** presuppose the camera is being used with a fixed placement. It is not recommended that the cameras are used as portable handheld devices or for taking measurements outside. When used in these capacities, the accuracy of the temperature measurements may not meet the same standard.

First Choice for Security Professionals
***HIKVISION* Technical Support**



Order Information

Contact Dave Atkins
Certified Level 1 Infrared Thermographer
Test Equipment & Thermal Camera Sales Manager
Tel: 01642 626 142 Email: dave@pass.co.uk
Or visit: www.testers.co.uk