

How To Configure Hikvision DS-2TPx1B-xAxFx Handheld Temperature Screening Thermographic Cameras

1. Relevant Products

- DS-2TP31B-3AUF Thermographic Handheld Camera
- DS-2TP21B-6AVFW Thermographic Handheld Camera

2. General Parameters

- **Temperature Measurement Range**
86°–113° F (30.0°–45.0° C)
- **Temperature Measurement Accuracy**
±0.9° F (±0.5° C)
- **Camera Resolution**
 - **DS-2TP31B-3AUF:** Thermal: 160 × 120
 - **DS-2TP21B-6AVFW:** Thermal: 160 × 120, Optical: 640 × 480
- **Operating Environment**
Indoor environment with calm air, 50°–95° F (10°–35° C)

3. Installation

• Installation Cautions

The performance of this temperature screening scheme is greatly affected by the environment. This scheme would apply only to indoor environments, or scenarios, with calm air and consistent temperature. Also, the relative installation location of devices greatly affect the accuracy of temperature measurement. In order to improve measurement accuracy, the installation environment has to meet certain requirements:

- Select a location with a one-direction path to ensure that cameras capture the full faces of all passing persons. It is recommended that people briefly stop movement during measurements.
- Select indoor environments with calm air and consistent temperature. Outdoor environments with rapid temperature changes are not recommended.
- If this scheme is used in entrance locations that connect indoor and outdoor environments, it is suggested that the installation location be kept at a distance from the entrance (such as at customs or security checkpoints).
- Avoid placing objects with high temperature in the scene.

- **Camera Installation**

1. Attach the camera to a tripod (highly recommended).

NOTE: If using the camera hand held, minimize camera movement when taking a measurement. Note that using the camera hand held will not be as accurate as using it on a tripod.

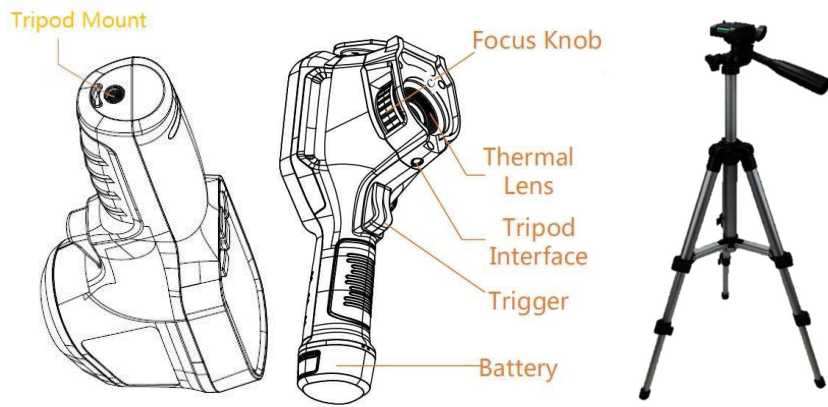
NOTE: This camera can be mounted on a tripod without an adapter. Hikvision offers a tripod for additional purchase. As suppliers have not fully restored production capacity recently, there are multiple suppliers, and there may be slight differences of the same model, which will not affect use. If you are concerned about this, you can locally purchase any tripod that meets the standards.

2. Set the camera in front of the one-direction path so that it can capture the full faces of passing people, as shown below.



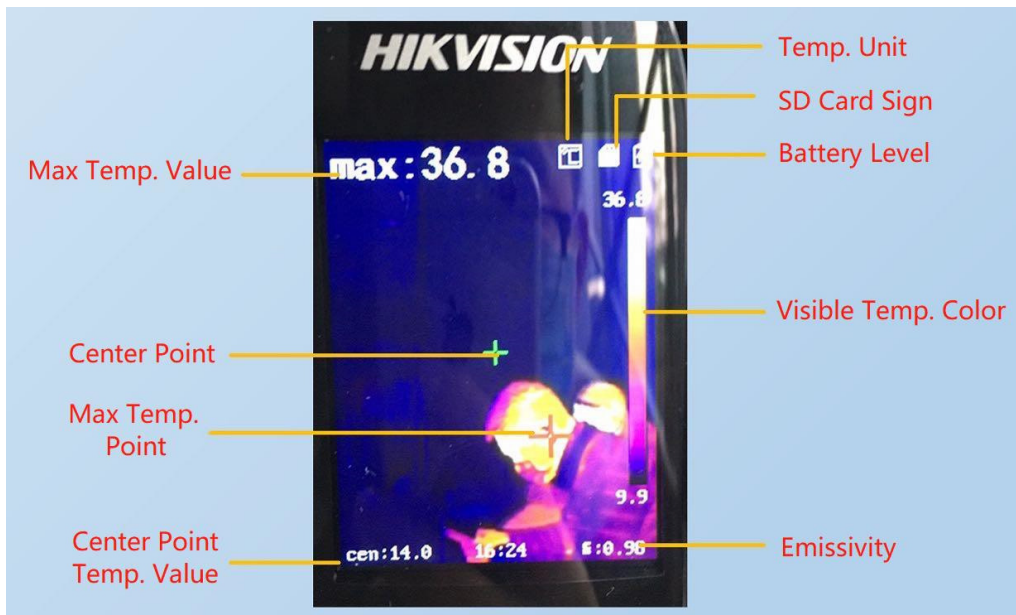
3. Set installation height between 4' 11" and 5' 7" (1.5 m and 1.7 m), at the same height as human faces (or at a low elevation angle to reduce error by heat sources near the ground).
4. Set the distance between the camera and object as follows:
 - **DS-2TP31B-3AUF:** Set at 3' 4" (1 m)
 - **DS-2TP21B-6AVFW:** Set between 3' 4" and 6' 7" (1 m and 2 m)

NOTE: Avoid placing any object in the camera view's background with a temperature higher than a human body's.

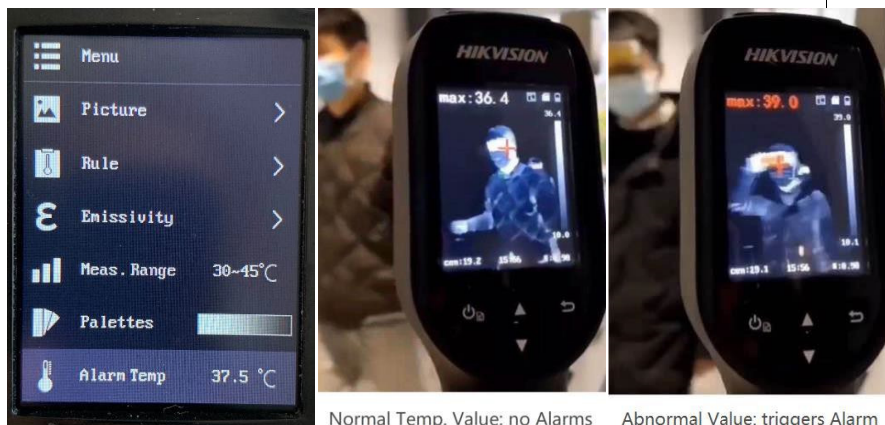


4. DS-2TP31B-3AUF Configuration

- **User Interface.** This handheld thermographic camera's user interface is shown below.



- **Alarm Temp.:** Set to 99.5° F (37.5° C), or adjust it to your requirements. If the measured value exceeds the set value, the displayed **Max Temp. Value** turns red and flashes, as shown below.

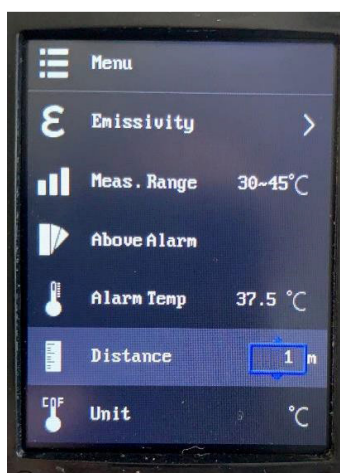


Normal Temp. Value: no Alarms Abnormal Value: triggers Alarm

- **Emissivity:** Set to 0.98 for human skin thermography, as shown below.



- **Distance:** Set to the actual distance between the camera and the measured object. This actual distance is recommended to be set between 3' 4" (1 m) normally, as shown below.



5. DS-2TP21B-6AVFW Configuration

- **User Interface:** This handheld thermographic camera's user interface is shown below.



- **Configuration**
 1. Go to **Settings >> Local Settings >> Thermography Settings**.
 2. Set **Emissivity** to 0.98.

- Set **Distance** to the actual distance between the camera and measured object.



- Go to **Thermography** and set **Hot Spot**, **Center Spot**, and other items as required.



- Go to **Palettes**, Set **Alarm Temperature (Above)** as required. If the measured value exceeds the set value, the displayed **Max Temp. Value** turns red and flashes, as shown below.



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

6. Usage Notes

Before using this device for actual body temperature measurement, run it for 15 minutes for preheating.

The measured human body temperature is the same as the measured **Max Temp. Value** in this scheme; 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 an alarm occurs, use a specialized medical thermometer as a further check.

All of the above Installation and Configuration descriptions assume that the device is used with fixed placement on a tripod. The temperature measurement accuracy may not meet the same standard if using it as a portable handheld device or outdoors (not recommended).

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