User manual
FLIR Cx5

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1 Notice to user

1.1 Important note

This manual provides important information about the FLIR Cx5 — a FLIR C5 camera installed in the certified FLIR Cx5 case. Before operating the device, your must read, understand, and follow all instructions, warnings, and legal disclaimers.

For information on the use and operation of the FLIR C5 camera, please refer to the FLIR C5 user manual.

1.2 Online documentation

Our manuals are continuously updated and published online.

To access the FLIR Cx5 and FLIR C5 manuals, the FLIR Cx5 certifications, and other product documentation, go to http://support.flir.com/resources/cx.

To access the manuals for our other products, as well as manuals for our discontinued products, go to https://support.flir.com/resources/app.

2 Disclaimers

2.1 Measurement accuracy

The specification of the temperature measurement accuracy is only applicable when the FLIR C5 is correctly installed in the FLIR Cx5 case.

2.2 Quality assurance

The Quality Management System under which the FLIR C5 camera is developed and manufactured has been certified in accordance with the ISO 9001 standard.

The Quality Management Systems under which the FLIR Cx5 case is manufactured has been certified in accordance with the following standards;

- EN ISO/IEC 80079-34
- UKSI 2016:1107 Schedule 3A, Part 2

FLIR Systems is committed to a policy of continuous development; therefore we reserve the right to make changes and improvements on any of the products without prior notice.

2.3 Copyright

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3 Safety information

3.1 Warnings related to a classified (potentially hazardous) area

⚠ **WARNING**
This equipment shall only be used where there is a low risk of mechanical damage.

⚠ **WARNING**
Do not remove the USB plug in the hazardous area.

⚠ **WARNING**
Do no recharge in the hazardous area.

⚠ **WARNING**
Do not disassemble in the hazardous area.

⚠ **WARNING**
Only use the FLIR Cx5 with the FLIR C5 pocket thermal imaging camera.

⚠ **WARNING**
If there are any grounds to believe the unit is no longer safe to use, it must be removed from service and measures taken to prevent its further unintentional use.

3.2 Maintenance

For safety critical maintenance, refer to EN60079-14 and EN60079-17.

3.3 Ex compliance marking

A non-removable label with the following markings is adhered to the rear (screen side) of the case. If this label is missing or illegible, do not enter the potentially hazardous area without consulting a suitably qualified person.

RINO SOLUTIONS LTD
MILL GRANARY, MALTON
YO17 8JA, U.K.

ExVeritas 21ATEX1124X
IECEx EXV 21.0064X
ExVeritas 21UKEX1161X

Model: Cx5
Year: XXXX
Serial #: XXXX

Ex
II 3 G Ex nR IIC T4 Gc Ta-20°C to +40°C
II 3 D Ex tc IIIB T135°C Dc Ta -20°C to +40°C

3.3.1 JPEx labels

3.4 Certifications

Scheme	Standards
ATEX	EN IEC 60079-0:2018 EN IEC 60079-15:2019 EN 60079-31:2014
IECEx	IEC 60079-0:2017 IEC 60079-15:2017 IEC 60079-31:2013
UKCA (Ex)	EN IEC 60079-0:2018 EN IEC 60079-15:2019 EN 60079-31:2014
JPEx	Ex nRIICT4 Gc (TC22926X) Ex tIIIB T135℃ Dc （TC22927X）

The FLIR Cx5 certifications are available online at http://support.flir.com/resources/cx.

4 FLIR Cx5 operations

4.1 Introduction

The FLIR Cx5 case is a precision engineered device which upgrades the FLIR C5 thermal imaging camera to be suitable for safe use in potentially hazardous (explosive) areas as defined by its certification.

Each FLIR Cx5 is supplied as standard with the following;

- FLIR C5 camera installed in FLIR Cx5 case
- Restricted breathing test port
- USB plug
- Transport pouch

4.2 USB charging and data transfer

WARNING

Do not remove the USB plug, connect to the camera, download data, or charge within the potentially hazardous area.

WARNING

It is not necessary to remove the camera from the case to charge. Doing so frequently may cause damage to the case seals.

The FLIR Cx5 case is designed to accommodate the standard USB-C charge/ download cable of the FLIR C5 camera.

1. To access the USB-C port of the FLIR C5 camera, remove the USB plug located on the edge of the case.
2. Connect the USB-C cable to the FLIR C5 socket and push until inserted, as shown in Figure 4.1. The camera can now be charged and connected to a PC.
3. Once complete, disconnect the USB cable and replace with the USB plug.

Figure 4.1 FLIR Cx5 with USB cable connected.

4.3 Tripod mount

The FLIR Cx5 case incorporates a centralised, bottom mounted tripod boss with a standard UNC ¼″-20.

Figure 4.2 FLIR Cx5 attached to tripod.

5 Routine testing, inspection, and maintenance

WARNING

Do not remove the USB plug, within the potentially hazardous area.

WARNING

Do not perform a restricted breathing test within the potentially hazardous area.

5.1 Routine testing, inspection, and maintenance

The FLIR Cx5 case relies upon its seals to prevent the entry of potentially explosive gas into the enclosure. It is important therefore that these seals are checked and where necessary replaced.

Where applicable, ensure that restricted breathing properties are checked after opening the case and that the case is inspected in accordance with EN60079-14 and EN60079-17.

5.2 Inserting the restricted breathing test port

In order to periodically check the restricted breathing properties, the FLIR Cx5 case is provided with a dedicated test port which is inserted in place of the USB plug. The test port provides a barbed hose entry suitable for vacuum capable hoses with an inside diameter of 5 mm.

1. To install the test port, first remove the USB plug located on the edge of the case.
2. Install the restricted breathing test port as shown in Figure 5.1.

Figure 5.1 FLIR Cx5 with restricted breathing test port.

3. Once complete, remove the restricted breathing test port and replace with the USB plug.

6 Opening and installation

The FLIR Cx5 is delivered with the camera installed in the case. Should you for some reason need to remove the camera from the case, follow the instructions in this chapter to open the case and then reinstall the camera.

⚠ **WARNING**
The FLIR Cx5 certification is void if the unit is tampered with or if the FLIR C5 is not correctly installed in the FLIR Cx5 case.

⚠ **WARNING**
Do not exert excessive pressure onto the window in the FLIR Cx5 case.

To open the case and install the camera, the following minimum tools are required;

- H1.5 Hex bit screwdriver
- H2.0 Hex bit screwdriver

6.1 Opening the FLIR Cx5 case

1. Place the FLIR Cx5 case, lens face down onto a clean, flat surface.
2. Using the H1.5 hex screwdriver, remove the four (4) bolts securing the corner shock absorbers as shown in Figure 6.1.

Figure 6.1 FLIR Cx5 shock absorber bolts.

3. Turn the FLIR Cx5 case over so that the lenses are facing upwards.
4. Using the H2.0 hex screwdriver, remove the eleven (11) bolts securing the case halves as shown in Figure 6.2.

Figure 6.2 FLIR Cx5 main retaining bolts.

5. Gently push back the shock absorbers and separate the two halves of the case taking care not to lose any fixings.

6.2 Installing the FLIR C5 camera

Prior to installation, ensure that the touchscreen, lens, and window of the FLIR C5 camera are clean and free from dust and dirt, as it will not be possible to clean them once installed into the case.

1. Place the FLIR C5 camera into the case rear section with the touchscreen against the inner face of the case glass.

Figure 6.3 FLIR Cx5 case with FLIR C5 camera inserted.

2. Spread the shock absorbers and place the FLIR Cx5 case front back into position, then allow the shock absorbers to re-seat.
3. Using the H2.0 hex screwdriver, install all eleven (11) fixing bolts but do not tighten fully.
4. Once all fixing bolts are in place, complete the case closure by tightening the bolts in a diametrically opposed manner until finger tight.
5. Turn the FLIR Cx5 case so that the lenses face down, and then complete the installation of the four (4) shock absorber bolts using the H1.5 hex screwdriver.

Website
http://www.flir.com

Customer support
http://support.flir.com

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Publ. No.: T810609
Release: AC
Commit: 96633
Head: 96633
Language: en-US
Modified: 2024-03-20
Formatted: 2024-03-20

T810609