

**Annex acc. to FCC Title 47 CFR Part 15
relating to
DERMALOG Identification Systems GmbH
DERMALOG FLC1**

Annex no. 4 User Manual Functional Description

**Title 47 - Telecommunication
Part 15 - Radio Frequency Devices
Subpart C – Intentional Radiators
ANSI C63.4-2014
ANSI C63.10-2013**



Deutsche
Akkreditierungsstelle
D-PL-12053-01-03

User Manual / Functional Description of the test equipment (EUT)

DERMALOG

THE BIOMETRICS
INNOVATION LEADER

MADE IN
GERMANY

User Guide

DERMALOG FLC1

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Revision history

Document Version	Date	Author	Changes
1.0	2020-03-27	DERMALOG	Initial document
1.1	2020-03-30	DERMALOG	Minor changes
1.2	2020-05-07	DERMALOG	Minor changes

Table 1: Revision history

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Introduction

The DERMALOG FLC1 captures facial images and detects the body temperature of a person.

This user guide describes the DERMALOG FLC1. It gives information on safety instructions, technical data, product description, installation, maintenance and disposal.



Figure 1: DERMALOG FLC1

1 Audience

This document is provided for users of the DERMALOG FLC1.

Any person working with the DERMALOG FLC1 must have previously read this document.

2 Document conventions

TERMS AND DEFINITIONS

Term	Definition
capture	The method of taking a biometric sample from an end user.

Table 2: Terms and definitions

ABBREVIATIONS

Abbreviation	Meaning
USB	Universal Serial Bus

Table 3: Abbreviations

TYPOGRAPHIC CONVENTIONS

Typographic Convention	Used for
bold	Important text passages In step-by-step instructions and their prerequisites: names of applications, products, chapters, GUI elements, tabs, screen sections and areas, keys, menu paths
<i>italic</i>	Directories, file names, values, document names, messages, email addresses and place holders in screen descriptions
<i>lowercase</i>	URLs and websites

Table 4: Typographic conventions

SYMBOLS AND ICONS





Symbol / Icon	Meaning
	Introduces a system response
	Notes, usage tips, or additional information
	Indicates an important text passage
NOTICE	NOTICE is used to address practices to property damage (and not related to personal injury). No safety alert symbol is used.
 CAUTION	CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Table 5: Symbols and icons

3 Safety instructions

IMPORTANT

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

These safety instructions must be read and understood prior to installation and operation by any person working with the DERMALOG FLC1. Keep these instructions always readily available at the DERMALOG FLC1.

Also pay attention to any warning messages shown by DERMALOG software, to any signs or labels on the DERMALOG FLC1 and to any further DERMALOG instructions shipped with the DERMALOG FLC1.

3.1 Purpose of this product

The DERMALOG FLC1 captures facial images and detects the body temperature of a person.



The DERMALOG FLC1 detects the body temperature of a person in order to make a preselection. The temperature detection is no medical fever measurement. In suspected cases a reference measurement with the clinical thermometer is necessary.

3.2 General



CAUTION

CUTTING DAMAGE.

Always check the DERMALOG FLC1 for any visible damages before use. Do not use the DERMALOG FLC1 if you see any visible damage (for example, sharp edges, broken safety coverings and so on) as this may cause injury.

Do not use a damaged DERMALOG FLC1.

NOTICE

To avoid damage on a USB cable, do not step on the cable, do not place heavy items on it and do not pull it forcefully. When disconnecting a USB cable, firmly grasp the USB plug to remove it from the computer.

Avoid any mechanical load on the DERMALOG FLC1, especially on the glass coverings of the cameras and the infrared projector, to prevent the DERMALOG FLC1 from breaking. Never place heavy items on the DERMALOG FLC1.

3.3 Transportation and storage

TRANSPORTATION

NOTICE

Use the packaging provided by DERMALOG.

Only use covered vehicles or covered ships.

The environmental conditions during transport must meet the conditions specified in the technical data (see chapter 5).

NOTICE

If transported by air, store the DERMALOG FLC1 in hermetic and heated compartments so that environmental conditions comply with the technical data (see chapter 5).

STORAGE**NOTICE**

The environmental conditions during storage must meet the conditions specified in the technical data section (see chapter 5).

The air of the location where the DERMALOG FLC1 is stored must not contain corrosive or active substances.

3.4 Positioning and environment

NOTICE

Only use the DERMALOG FLC1 indoors.

Place the DERMALOG FLC1 on a suitable mount (e.g. a tripod) or a flat surface that is at room temperature.

Observe the recommended temperature range for the DERMALOG FLC1 to operate (see chapter 5).

Provide adequate space around the DERMALOG FLC1 for operation and maintenance. Air circulation is required to cool the device. Do not restrict the air flow around the device.

Use the DERMALOG FLC1 only in a dry environment.

Keep the working environment always clean and dust-free.

Do **NOT** expose the DERMALOG FLC1 to:

- direct sunlight
 - excessive dust, heat or humidity (for example, through a water heater or humidifier)
 - an atmosphere where ammonia gas or volatile or flammable chemicals are present (for example, alcohol, paint thinner)
 - vibrations
 - rapid temperature changes
 - magnetic fields (for example, if placed near loudspeakers, televisions or radios)
-

3.5 Installation

NOTICE

Do not use a USB cable longer than 1.8 m. If you want to connect the DERMALOG FLC1 via a USB hub, always use a self-powered (active) hub.

Connect the DERMALOG FLC1 only to suitable IT systems (see chapter 5).

3.6 Operation

Make sure all people working with the DERMALOG FLC1 have read and understood this user guide and received a thorough training.

CAUTION

The DERMALOG FLC1 contains a camera of the Intel® RealSense™ D400 series. The Intel® RealSense™ D400 series is classified as Class 1 Laser Product under the EN/IEC 60825-1, Edition 3 (2014) internationally and IEC60825-1, Edition 2 (2007) in the US.

This product complies with US FDA performance standards under 21 CFR 1040.10 for laser products except for deviations pursuant to Laser Notice No. 50 dated June 24, 2007.



Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



Do not power on the product if any external damage was observed.

There are no service/maintenance, modification, or disassembly procedures for the stereo module and infrared projector. The system integrator must return modules before any failure analysis is performed.

- Do not attempt to open any portion of this laser product.
- Invisible laser radiation when opened. Avoid direct exposure to beam.
- There are no user serviceable parts with this laser product.
- Modification or service of the stereo module, specifically the infrared projector, may cause the emissions to exceed Class 1.
- No magnifying optical elements, such as eye loupes and magnifiers, are allowed.
- Do not try to update camera firmware that is not officially released for the specific camera module SKU and revision.

NOTICE

If the DERMALOG FLC1 makes strange noises, or gives off smoke, heat or strange odors, or other abnormalities occur when in use, immediately disconnect it from the computer. Then contact DERMALOG.

Keep liquids away from the DERMALOG FLC1.

Do not drop the DERMALOG FLC1 or subject it to impact or strong shock.

Use the DERMALOG FLC1 only for the purpose it has been designed for.

3.7 Maintenance

NOTICE

Never disassemble, modify, repair, remove parts or open the housing of the DERMALOG FLC1, unless expressly authorized by DERMALOG. Disregarding this warning can result in serious damage to the DERMALOG FLC1 and will cause the loss of any warranty.

If you need to return the DERMALOG FLC1 for repair, use a suitable packing material to avoid further damage (preferably the original packing material).

Check the DERMALOG FLC1 regularly for damage and malfunction, especially if the operating personnel change frequently. In case of malfunction, disconnect the USB cable and stop using the DERMALOG FLC1.

3.8 Disposal

NOTICE

When disposing the DERMALOG FLC1, make sure you comply with any laws and regulations applicable at your location.

4 Delivery package content

The delivery package contains:

- DERMALOG FLC1



- USB 3.0 cable (USB-C to USB-A, 1 m length)



Unless otherwise expressly agreed, download the purchased software from the DERMALOG Support Center (<https://support.dermalog.com>).

5 Technical data

The technical data of the DERMALOG FLC1 are listed in Table 6.

Technical Features	
Sensors	Thermal sensor RGB sensor 3D sensor
Detection accuracy of body temperature	± 0.5 °C
Measuring speed	0.7 - 2 s
Weight	130 g
Dimensions	120 mm x 37 mm x 23 mm
Interface	USB 3.0
SDK	.Net/C/C++/Java (coming soon)
Application software	DERMALOG Fever Detection
Ambient temperature and humidity during operation	10 °C to 30 °C (50°F to 86°F), humidity 20 – 75 % non-condensing
Ambient temperature and humidity when storing or transporting the device	0 °C to 40 °C (32°F to 104°F), humidity 10 – 90 % non-condensing

Table 6: Technical data of DERMALOG FLC1

The software and hardware requirements for operating the DERMALOG FLC1 are listed in Table 7.

Requirements	
Processor	Intel i5/ 8th generation (similar or equal)
RAM	8 GB DDR3 (minimum), 16 GB DDR4 (recommended)
Hard Drive	1 GB (SSD recommended)
Interfaces	USB 3.0 SuperSpeed Power supply & current consumption: ▪ USB 3.0: 5 Volt ± 5%, 900 mA max.
Graphics card	Additional graphics card is recommended
Operating system	Windows 10

Table 7: Software and hardware requirements

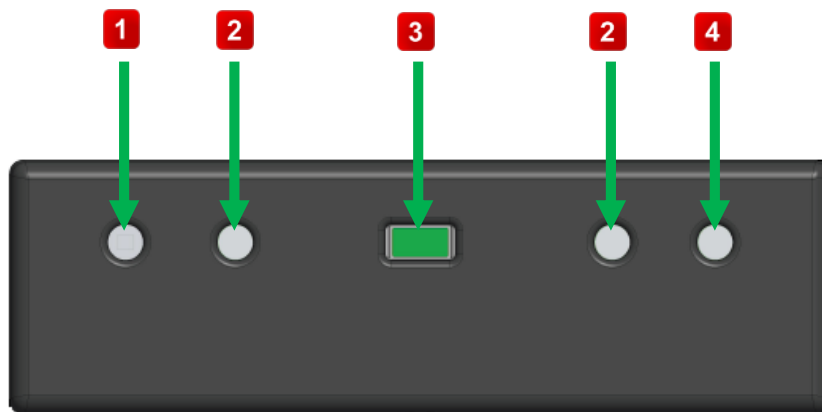
6 Product description

The DERMALOG FLC1 is intended to capture facial images and to detect the body temperature of a person.

6.1 Hardware

6.1.1 General views

Figure 2, Figure 3 and Figure 4 show different views of the DERMALOG FLC1.



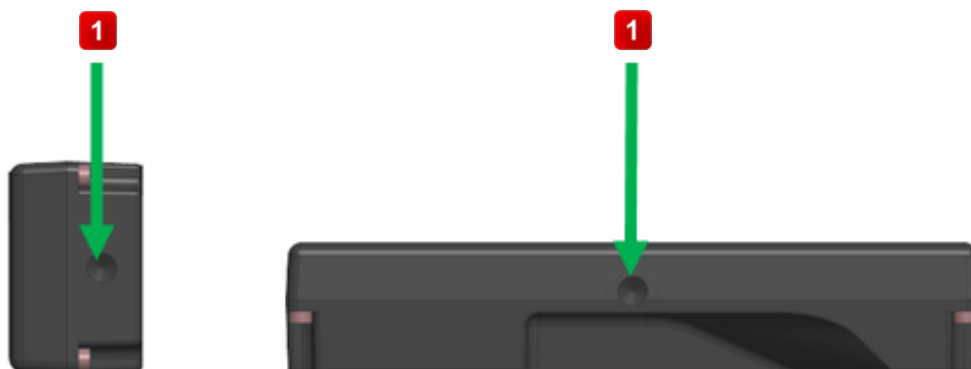
1 color camera

2 infrared camera

3 infrared projector

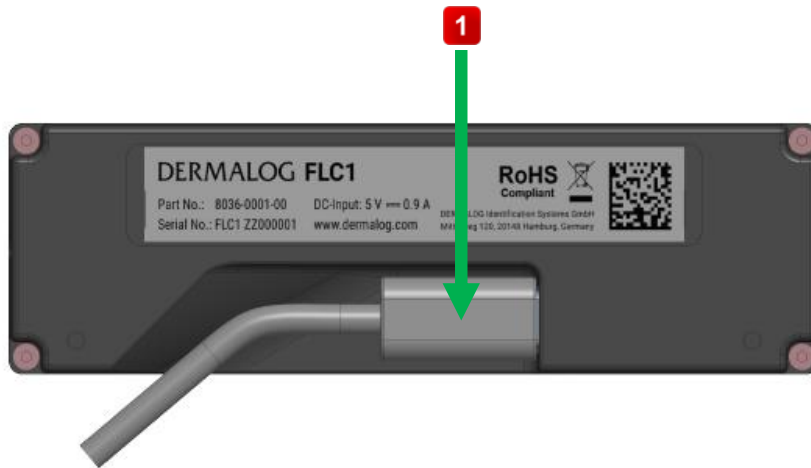
4 thermal camera

Figure 2: Front view of the DERMALOG FLC1



1 UNC 1/4"-20 thread for mounting the DERMALOG FLC1 on a suitable mount, e.g. a tripod

Figure 3: Side view and bottom view of the DERMALOG FLC1



1 USB 3.0 cable

Figure 4: Back view of the DERMALOG FLC1

6.1.2 Dimensions

Figure 5 shows the dimensions of the DERMALOG FLC1.

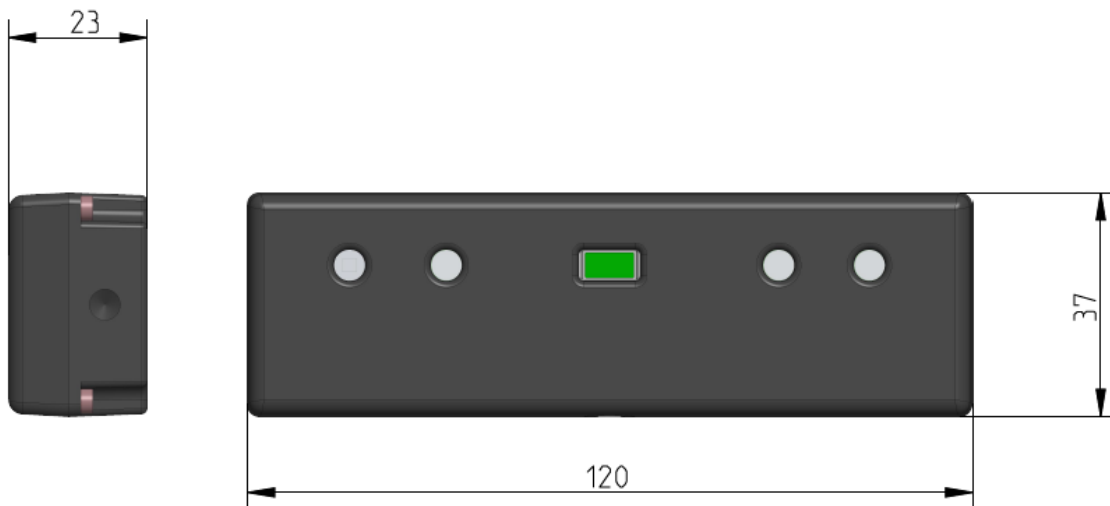


Figure 5: Dimensions of the DERMALOG FLC1

6.2 Available software products

The DERMALOG FLC1 is operated with the *DERMALOG Fever Detection Application*.



For detailed information on the *DERMALOG Fever Detection Application*, see the separate document *DERMALOG Fever Detection Application User Guide*.

7 Installation

Before commissioning the DERMALOG FLC1 perform the following steps:

- Position the DERMALOG FLC1 see chapter 7.1
- Connect the hardware see chapter 7.2
- Install the software package see chapter 7.3
- Calibrate the DERMALOG FLC1 see chapter 7.4

7.1 Position the DERMALOG FLC1

NOTICE

Only use the DERMALOG FLC1 indoors.

Place the DERMALOG FLC1 on a suitable mount, e.g. a tripod.

Observe the recommended temperature range for the DERMALOG FLC1 to operate (see chapter 5).

Provide adequate space around the DERMALOG FLC1 for operation and maintenance. Air circulation is required to cool the device. Do not restrict the air flow around the device.

Use the DERMALOG FLC1 only in a dry environment.

Keep the working environment always clean and dust-free.

Do **NOT** expose the DERMALOG FLC1 to:

- direct sunlight
- excessive dust, heat or humidity (for example, through water heater or humidifier)
- an atmosphere where ammonia gas or volatile or flammable chemicals are present (for example, alcohol, paint thinner)
- vibrations
- rapid temperature changes
- magnetic fields (for example, if placed near loudspeakers, televisions or radios)

To achieve optimal results, follow the recommendations from DERMALOG:



Do NOT point the DERMALOG FLC1 at a heat source because this may lead to inaccurate measurements of the person's body temperature. The person must also NOT directly be exposed to radiation from heat sources (e.g. from a heater in the room).

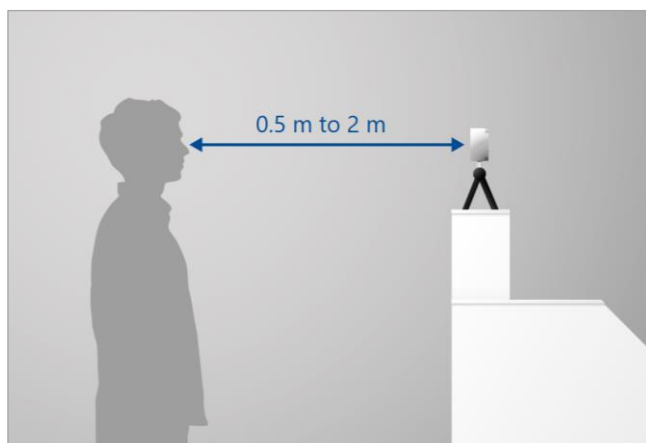


Figure 6: Recommended alignment of DERMALOG FLC1

- The DERMALOG FLC1 is positioned at the person's eye level.
- The distance between the person and the DERMALOG FLC1 is between 0.5 m and 2 m.

7.2 Connect the hardware

Prerequisites:

- You comply with the safety instructions (see chapter 3).
- You have positioned the DERMALOG FLC1 according to chapter 7.1



If you want to connect the DERMALOG FLC1 via a USB hub, always use a self-powered (active) hub.

START:

STEP 1 Check the DERMALOG FLC1 and the USB cables for damages and breaks.

If there are any damages and breaks, stop using the DERMALOG FLC1 and contact DERMALOG via email to support@dermalog.com.

Otherwise, proceed with **Step 2**.

STEP 2 Plug the USB-C connector of the USB 3.0 cable into the back port of the DERMALOG FLC1.



The USB-C-connector is the smaller connector on the USB 3.0 cable.

STEP 3 Plug the USB-A connector of the USB 3.0 cable into a USB 3 port of the computer.



Make sure that you connect the USB 3.0 cable to a USB 3 port (not to a USB 2 port). Usually, a USB 3 port on the computer is labelled with **SS** (for SuperSpeed) and is marked with blue color inside the USB 3 port.



No additional drivers need to be installed to operate the DERMALOG FLC1. The standard Windows camera drivers are used.

STEP 4 In the **Windows Start Menu**, type *Device Manager*, open the **Device Manager** and check that the components of the DERMALOG FLC1 are listed (see Figure 7).

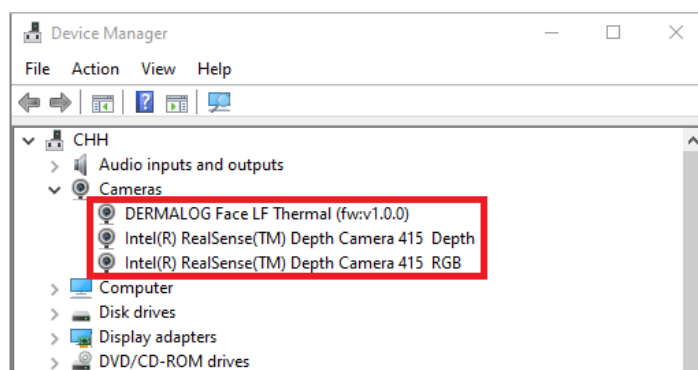


Figure 7: Components of the DERMALOG FLC1

FINISH: You have connected the DERMALOG FLC1 to the computer.

7.3 Install the software package



For information on the installation of the software package, see the separate document *DERMALOG Fever Detection Application User Guide*.

7.4 Calibrate the DERMALOG FLC1



For information on the calibration, see the separate document *DERMALOG Fever Detection Application User Guide*.

8 Maintenance

The DERMALOG FLC1 does not need regular maintenance, but the device must be checked regularly for external damage.

NOTICE

Never disassemble, modify, repair, remove parts or open the housing of the DERMALOG FLC1, unless expressly authorized by DERMALOG. Disregarding this warning can result in serious damage to the DERMALOG FLC1 and will cause the loss of any warranty.

If you need to return the DERMALOG FLC1 for repair, use a suitable packing material to avoid further damage (preferably the original packing material).

Check the DERMALOG FLC1 regularly for damage and malfunction, especially if the operating personnel change frequently. In case of malfunction, disconnect the USB cable and stop using the DERMALOG FLC1.

9 Disposal

NOTICE

When disposing the DERMALOG FLC1, make sure you comply with any laws and regulations applicable at your location.

10 Terms of Warranty

1. As to the products (the “Products”) provided by DERMALOG, DERMALOG’s warranty should be as follows:
 - 1.1. DERMALOG warrants that all hard- and software were produced with due care and diligence. However, it is agreed that it is not possible in accordance with the state of the art to rule out technical errors under all application conditions. Where this is not possible in accordance with the state of the art at the time of production, warranty claims shall be excluded. Insignificant or minor deviations shall not lead to any warranty claims.
 - 1.2. DERMALOG warrants that the contractual Products are generally described accurately in the product information. The technical data and descriptions in the product information by itself do not represent a warranty of specific qualities. DERMALOG shall not be liable if the program functions do not satisfy the requirements of the customer or work together with own components of the customer in the selection chosen by the customer.
 - 1.3. In case of a defect, DERMALOG, at its sole discretion, shall have the right to remedy the defect or to supply alternative hardware free from the defect. In case of defects of software, the remedy by DERMALOG can be achieved for example, by the provision of an update, by the exchange of the software in whole, or by written and/or oral directives, which avoid the effects of the defect.
 - 1.4. DERMALOG reserves the right to provide updates or to exchange the software in whole or in parts at all times. The customer shall install such updates or exchange the software in whole or in parts if the functions of the software are not materially reduced and if time and effort for the replacement are not unreasonable. There shall be no right to claim for updates or for the exchange of the software in whole or in parts under these terms and conditions except otherwise provided.
 - 1.5. If the customer or a third party undertakes improper modifications or changes to the Products, the warranty shall be void for these and the consequences resulting thereof. If a defect is the consequence of the non-observation of operating or maintenance instructions, all claims and rights of the customer due to defects shall be barred. This shall also apply if the defect is a consequence of incorrect use, storage or foreign influence. For the avoidance of doubt, this exclusion of warranty shall not apply and DERMALOG shall be obliged to render warranty services for a defect when the customer proves that its improper modification, change, or maintenance work neither has caused the defect nor has impeded the identification or correction of a defect.
 - 1.6. Where a defect is found upon investigation not to be DERMALOG’s responsibility, DERMALOG reserves the right to charge the customer on a time and materials basis at DERMALOG’s then current rates for all costs and expenses incurred by DERMALOG in consequence of such investigation.
 - 1.7. The warranty period for the hardware components terminates after twelve (12) months beginning with the day of the delivery and for software components after twelve (12) months after acceptance of the installation.
 - 1.8. The customer is obliged to inspect the delivered Products immediately after receipt or – in case if software to be installed – after installment. Any written notification of defects has to be made to DERMALOG within seven (7) calendar days after receipt of the Products, in case of hidden defects within the same period after awareness of the defects. Otherwise, all warranty claims shall be barred.
2. As to Support Services, DERMALOG’s warranty shall be the following:
 - 2.1. DERMALOG warrants that the Support Service will be performed by competent persons exercising skills appropriate to their qualifications and experience.
 - 2.2. DERMALOG agrees to correct free of charge any inaccurate work at the customer’s premises in breach of clause 2.1 provided such inaccurate work is reported to DERMALOG in writing within one month after performance of such work.
 - 2.3. Where a defect is found upon investigation not to be DERMALOG’s responsibility, DERMALOG reserves the right to charge the customer on a time and materials basis at DERMALOG’s then current rates for all costs and expenses incurred by DERMALOG in consequence of such investigation.

To obtain warranty service, you must first contact DERMALOG via support@dermalog.com to determine the problem and the most appropriate solution for you.

11 Ordering information

For ordering information, please contact DERMALOG via sales@dermalog.com.

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Receive further Information on our company website
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DERMALOG FLC1 Compliance Statement

Compliance Statement for Part 15 of the FCC Rules:

Model Name / PMN: DERMALOG FLC1
FCC ID: 2APZCFLC1
HVIN: 8036-0001-01
FVIN: 1.1.0

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or an experienced radio/TV technician for help.*

Compliance Statement Canada:

Model Name / PMN: DERMALOG FLC1
IC: 26090-FLC1
HVIN: 8036-0001-01
FVIN: 1.1.0

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.