

## P/N: 89206-0201

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### Website

<http://www.flir.com>

### Customer support

<http://support.flir.com>

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| Imaging and optical data                 |  |
|--|--|
| Infrared resolution                      | 640 × 480 pixels   |
| UltraMax (super-resolution) <sup>1</sup> | Yes  |
| NETD                                     | <ul style="list-style-type: none"> <li>• &lt;30 mK, 42° @ +30°C (+86°F)</li> <li>• &lt;40 mK, 24° @ +30°C (+86°F)</li> <li>• &lt;50 mK, 14° @ +30°C (+86°F)</li> </ul>                   |
| Field of view                            | <ul style="list-style-type: none"> <li>• 42° × 32°</li> <li>• 24° × 18°</li> <li>• 14° × 10°</li> </ul>  |
| Minimum focus distance                   | <ul style="list-style-type: none"> <li>• 0.15 m (0.49 ft.), 42°</li> <li>• 0.15 m (0.49 ft.), 24°</li> <li>• 1.0 m (3.28 ft.), 14°</li> <li>• Macro mode 50 μm as option, 24°</li> </ul> |
| Minimum focus distance with MSX          | <ul style="list-style-type: none"> <li>• 0.65 m (2.13 ft.), 42°</li> <li>• 0.5 m (1.64 ft.), 24°</li> <li>• 1.0 m (3.28 ft.), 14°</li> </ul>   |
| Focal length                             | <ul style="list-style-type: none"> <li>• 10 mm (0.39 in.), 42°</li> <li>• 17 mm (0.67 in.), 24°</li> <li>• 29 mm (1.41 in.), 14°</li> </ul>  |
| Spatial resolution (IFOV)                | <ul style="list-style-type: none"> <li>• 1.20 mrad/pixel, 42°</li> <li>• 0.66 mrad/pixel, 24°</li> <li>• 0.38 mrad/pixel, 14°</li> </ul>   |
| Available extra lenses                   | <ul style="list-style-type: none"> <li>• 6° (service calibration required)</li> </ul>  |
| Lens identification                      | Automatic  |
| f number                                 | <ul style="list-style-type: none"> <li>• 1.1, 42°</li> <li>• 1.3, 24°</li> <li>• 1.5, 14°</li> </ul>   |
| Image frequency                          | 30 Hz  |

1. Not supported when using macro.

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| <b>Imaging and optical data</b>   |   |
|---|---|
| Focus   | <ul style="list-style-type: none"> <li>• Continuous LDM</li> <li>• One-shot LDM</li> <li>• One-shot contrast</li> <li>• Manual</li> </ul>   |
| Field of view match   | Yes   |
| Digital zoom  | 1–8× continuous   |
| <b>Detector data</b>  |   |
| Focal plane array/spectral range  | Uncooled microbolometer/7.5–14 μm   |
| Detector pitch  | 12 μm   |
| <b>Image presentation</b>   |   |
| Resolution (display)  | 640 × 480 pixels (VGA)  |
| Surface brightness (cd/m <sup>2</sup> )   | 400   |
| Screen size   | 4 in.   |
| Viewing angle   | 80°   |
| Color depth (bits)  | 24  |
| Aspect ratio  | 4:3   |
| Auto-rotation   | Yes   |
| Touchscreen   | Optically bonded PCAP   |
| Display technology  | IPS   |
| Cover glass material  | Dragontrail®  |
| Programmable buttons  | 2   |
| Viewfinder  | Yes   |
| Image adjustment  | <ul style="list-style-type: none"> <li>• Automatic</li> <li>• Automatic maximum</li> <li>• Automatic minimum</li> <li>• Manual</li> </ul>   |
| <b>Image presentation modes</b>   |   |
| Infrared image  | Yes   |
| Visual image  | Yes   |
| MSX   | Yes   |
| Picture in picture  | Resizable and movable   |
| Gallery   | Yes   |
| <b>Measurement</b>  |   |
| Camera temperature range  | <ul style="list-style-type: none"> <li>• –40 to 120°C (–40 to 248°F)</li> <li>• 0 to 650°C (32 to 1202°F)</li> <li>• 300 to 2000°C (572 to 3632°F)</li> </ul>   |
| Object temperature range and accuracy (for ambient temp. 15 to 35°C (59 to 95°F)) | <ul style="list-style-type: none"> <li>• Range –40 to 120°C (–40 to 248°F): <ul style="list-style-type: none"> <li>◦ –40 to 5°C (–40 to 41°F): ±2°C (±3.6°F)</li> <li>◦ 5 to 100°C (41 to 212°F): ±1°C (±1.8°F)</li> <li>◦ 100 to 120°C (212 to 248°F): ±1%</li> </ul> </li> <li>• Range 0 to 650°C (32 to 1202°F): <ul style="list-style-type: none"> <li>◦ 0 to 100°C (32 to 212°F): ±2°C (±3.6°F)</li> <li>◦ 100 to 650°C (212 to 1202°F): ±2%</li> </ul> </li> <li>• Range 300 to 2000°C (572 to 3632°F): ±2%*</li> </ul> |

\*) For 42° lens; accuracy is ±3% in the range 1800 to 2000°C.



# FLIR T865 24° + 14° & 42°

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|                                     |   |
|-------------------------------------|---|
| <b>Inspection mode</b>              |   |
| FLIR Inspection route               | Enabled in the camera   |
| <b>Measurement analysis</b>         |   |
| Spotmeter                           | 10 in live mode   |
| Area                                | 5 in live mode  |
| Automatic hot/cold detection        | Automatic maximum/minimum markers within area   |
| Measurement presets                 | <ul style="list-style-type: none"> <li>No measurements</li> <li>Center spot</li> <li>Hot spot</li> <li>Cold spot</li> <li>User preset 1</li> <li>User preset 2</li> </ul> |
| Difference temperature              | Yes   |
| Reference temperature               | Yes   |
| Emissivity correction               | Yes, variable from 0.01 to 1.0 or selected from materials list  |
| Measurement corrections             | Yes   |
| External optics/windows correction  | Yes   |
| <b>Alarm</b>                        |   |
| Color alarm (isotherm)              | <ul style="list-style-type: none"> <li>Above</li> <li>Below</li> <li>Interval</li> <li>Condensation (moisture/humidity/dewpoint)</li> <li>Insulation</li> </ul>           |
| Measurement function alarm          | Audible/visual alarms (above/below) on any selected measurement function  |
| <b>Set-up</b>                       |   |
| Color palettes                      | <ul style="list-style-type: none"> <li>Arctic</li> <li>White hot</li> <li>Black hot</li> <li>Iron</li> <li>Lava</li> <li>Rainbow</li> <li>Rainbow HC</li> </ul>           |
| Setup commands                      | Local adaptation of units, language, date, and time formats   |
| Languages                           | 21  |
| <b>Service functions</b>            |   |
| Camera software update              | Using USB cable or SD card  |
| <b>Storage of images</b>            |   |
| Storage media                       | Removable memory: SD card   |
| Time lapse (Periodic image storage) | 10 seconds to 24 hours (infrared)   |
| Remote control operation            | Using USB cable or Wi-Fi  |
| Image file format                   | Standard JPEG, measurement data included. Infrared-only mode.   |



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| <b>Image annotations</b>  |   |
|---|---|
| Voice   | 60 seconds with built-in microphone and speaker (and via Bluetooth) on still images and video   |
| Text  | Text from predefined list or soft keyboard on touchscreen   |
| Visual image annotation   | Yes   |
| Image sketch  | Yes: on infrared only   |
| Sketch  | From touchscreen  |
| METERLiNK   | Wireless connection (Bluetooth) to:<br>FLIR meters with METERLiNK   |
| Laser distance meter information  | Yes   |
| Area measurement information  | Yes   |
| GPS   | Location data automatically added to every still image and first frame in video from built-in GPS   |
| <b>Video recording in camera</b>  |   |
| Radiometric infrared-video recording  | RTRR (.csq)   |
| Non-radiometric infrared-video recording  | H.264 to memory card  |
| Visual video recording  | H.264 to memory card  |
| <b>Video streaming</b>  |   |
| Radiometric infrared-video streaming (compressed)                                 | Over UVC  |
| Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) | <ul style="list-style-type: none"> <li>• H.264 (AVC) over RTSP (Wi-Fi)</li> <li>• MPEG4 over RTSP (Wi-Fi)</li> <li>• MJPEG over UVC and RTSP (Wi-Fi)</li> </ul> |
| Visual video streaming  | Yes   |
| <b>Digital camera</b>   |   |
| Resolution  | 5 MP with LED light   |
| Focus   | Fixed   |
| Field of view   | 53° x 41°   |
| Video lamp  | Built-in LED light  |
| <b>Laser pointer</b>  |   |
| Laser alignment   | Position is automatically displayed on the infrared image   |
| Laser distance meter  | Activated by dedicated button   |
| Laser   | Class 2, 0.05–40 m (0.16–131 ft.) ±1% of measured distance  |
| <b>Data communication interfaces</b>  |   |
| Interfaces  | USB 2.0, Bluetooth, Wi-Fi, DisplayPort  |
| METERLiNK/Bluetooth   | Communication with headset and external sensors   |
| Wi-Fi   | Peer to peer (ad hoc) or infrastructure (network)   |
| Audio   | Microphone and speaker for voice annotation of images   |
| USB   | USB Type-C: data transfer/video/power   |
| USB standard  | USB 2.0 High Speed  |

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| <b>Data communication interfaces</b>  |   |
|---------------------------------------|---|
| Video out                             | DisplayPort   |
| Video connector type                  | DisplayPort over USB Type-C   |
| <b>Radio</b>                          |   |
| Operating frequency                   | Bluetooth + EDR/LE: 2402–2480 MHz<br>WLAN 2.4 GHz: 2412–2462 MHz<br>WLAN 5 GHz: 5150–5350 MHz (DFS: only slave mode)<br>Note that frequency band 5150–5350 MHz is for indoor use only, see national regulations.            |
| RF output (EIRP)                      | Bluetooth + EDR/LE: < 10 dBm<br>WLAN: < 17 dBm  |
| Antenna                               | Integrated PIFA antenna (gain: maximum 1.4 dBi)   |
| <b>Power system</b>                   |   |
| Battery type                          | Rechargeable Li-ion battery   |
| Battery voltage                       | 3.6 V   |
| Battery operating time                | > 4 hours at 25°C (77°F) with typical use   |
| Charging system                       | In camera (AC adapter or 12 V from a vehicle) or two-bay charger  |
| Charging time (using two-bay charger) | 3.5 h to 90% capacity, on-screen indicator  |
| Charging temperature                  | 0°C to +45°C (+32°F to +113°F), except for the Korean market: +10°C to +45°C (+50°F to +113°F)  |
| External power operation              | AC adapter 90–260 V AC (50/60 Hz) or 12 V from a vehicle (cable with standard plug, optional)   |
| Power management                      | Automatic shut-down and sleep mode  |
| <b>Environmental data</b>             |   |
| Operating temperature range           | –15 to +50°C (5–122°F)  |
| Storage temperature range             | –40 to +70°C (–40 to 158°F)   |
| Humidity (operating and storage)      | IEC 60068-2-30/24 hours, 95% relative humidity, 25–40°C (77–104°F)/2 cycles   |
| EMC                                   | <ul style="list-style-type: none"> <li>ETSI EN 301 489-1 (radio)</li> <li>ETSI EN 301 489-17</li> <li>EN 61000-6-2 (immunity)</li> <li>EN 61000-6-3 (emission)</li> <li>FCC 47 CFR part 15 B, class B (emission)</li> </ul> |
| Radio spectrum                        | <ul style="list-style-type: none"> <li>ETSI EN 300 328</li> <li>ETSI EN 301 893</li> <li>FCC 47 CFR part 15 C</li> <li>FCC 47 CFR part 15 E</li> </ul>  |
| Encapsulation                         | IP 54 (IEC 60529)   |
| Shock                                 | 25g (IEC 60068-2-27)  |
| Vibration                             | 2g (IEC 60068-2-6)  |
| Safety                                | Camera: <ul style="list-style-type: none"> <li>IEC/EN 60950-1, IEC/EN 62368-1</li> </ul> Power supply: <ul style="list-style-type: none"> <li>IEC/EN 62368-1</li> <li>CSA/UL/KC/SAA/PSE 60950-1</li> </ul>                  |

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| Physical data              |  |
|----------------------------|--|
| Weight (including battery) | 1.4 kg (3.1 lb.)   |
| Size (L x W x H)           | <ul style="list-style-type: none"> <li>• Lens vertical: 164.3 x 201.3 x 84.1 mm (6.5 x 7.9 x 3.3 in.)</li> <li>• Lens horizontal: 164.3 x 201.3 x 167.3 mm (6.5 x 7.9 x 6.6 in.)</li> </ul>  |
| Battery weight             | 195 g (6.89 oz.)   |
| Battery size (L x W x H)   | 59 x 66 x 94 mm (2.3 x 2.6 x 3.7 in.)  |
| Tripod mounting            | UNC 1/4"-20  |
| Housing material           | PCABS with TPE, magnesium  |
| Color                      | Black  |
| Warranty and service       |  |
| Warranty                   | <a href="http://www.flir.com/warranty/">http://www.flir.com/warranty/</a>  |
| Shipping information       |  |
| Packaging, type            | Cardboard box  |
| Packaging, contents        | <ul style="list-style-type: none"> <li>• Accessory box I: <ul style="list-style-type: none"> <li>◦ Power supply for battery charger</li> <li>◦ Power supply, 15 W/3 A</li> <li>◦ Printed documentation</li> <li>◦ SD card (8 GB)</li> <li>◦ USB 2.0 A to USB Type-C cable</li> <li>◦ USB Type-C to HDMI and PD adapter</li> <li>◦ USB Type-C to USB Type-C cable (USB 2.0 standard)</li> </ul> </li> <li>• Accessory box II: <ul style="list-style-type: none"> <li>◦ Lens cap strap</li> <li>◦ Lens cleaning cloth</li> <li>◦ Neck strap</li> <li>◦ Small eyecup</li> </ul> </li> <li>• Battery (2 ea)</li> <li>• Battery charger</li> <li>• Extra lens, 14°</li> <li>• Extra lens, 42°</li> <li>• Hard transport case</li> <li>• Infrared camera with lens</li> <li>• Lens cap, front</li> <li>• Lens cap, front and rear (only for extra lenses)</li> <li>• License card: FLIR Thermal Studio Pro (3 month subscription) + FLIR Route Creator Plugin for Thermal Studio Pro (3 month subscription)</li> </ul> |
| Packaging, weight          | 6.5 kg (14.3 lb.)  |
| Packaging, size            | 500 x 190 x 370 mm (19.7 x 7.5 x 14.6 in.)   |
| EAN-13                     | 7332558027349  |
| UPC-12                     | 845188023416   |
| Country of origin          | Sweden   |

### Supplies & accessories:

- T300238; Macro lens 2.0x with case
- T300095; IR lens, f=70 mm (6°) with case
- T131171ACC; Remote operation button
- T199300ACC; Battery
- T199347ACC; Hard transport case for FLIR T8xx, T5xx, and GF7x series
- T199610; Battery charger



## FLIR T865 24° + 14° & 42°

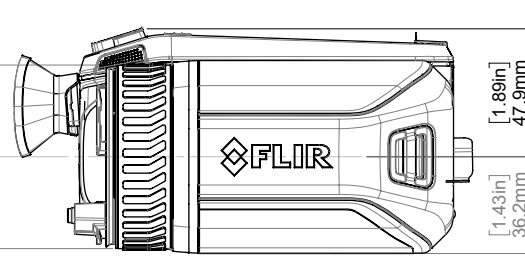
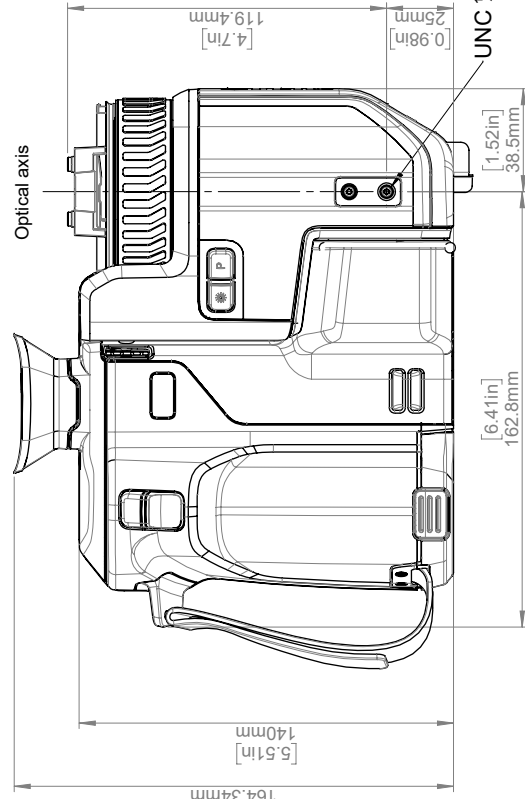
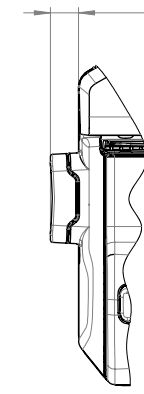
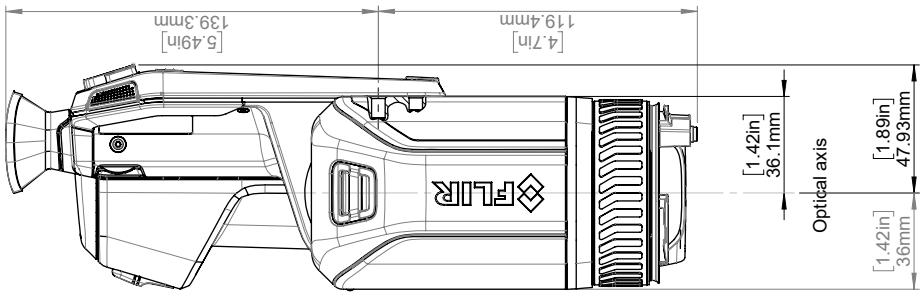
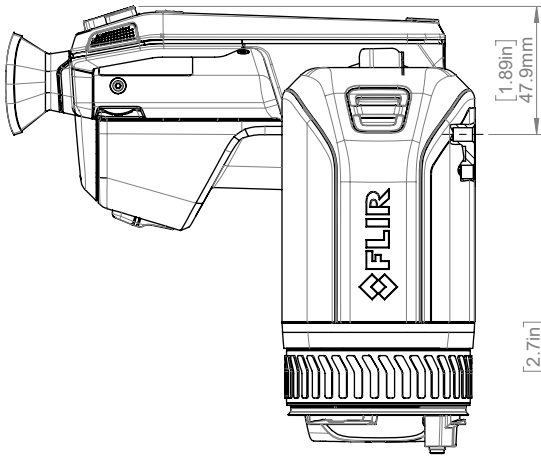
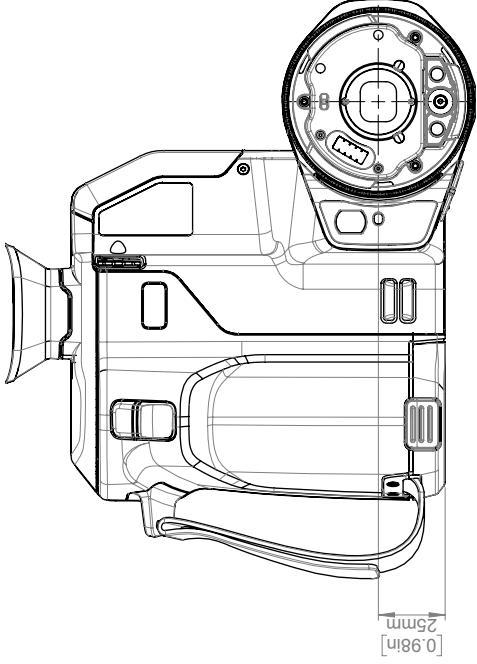
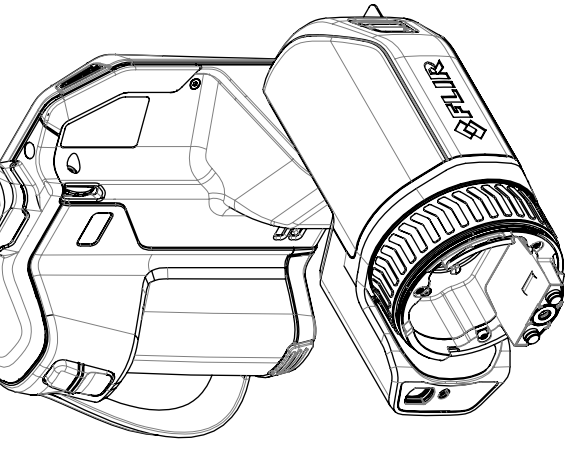
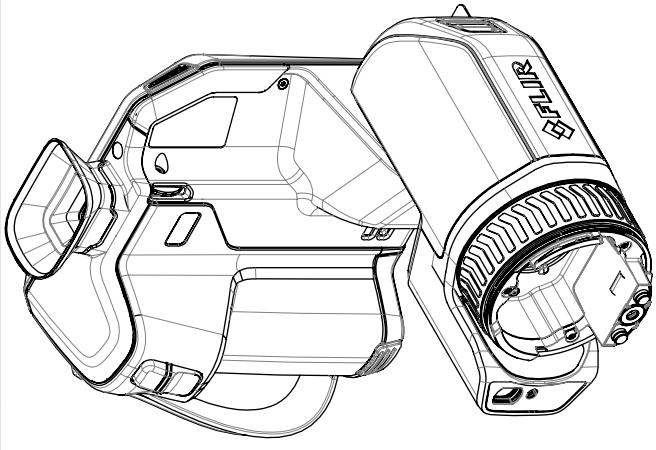
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- T300030; Option, No radio
- T911997; Tripod
- T911998; HDMI 2-port video splitter
- T300369; Mounting kit (FLIR T5xx, T8xx, Exx)
- T130531ACC; Large eyecup
- T300188; Hand strap and neck strap
- T850105; FLIR Inspection Route - Camera Option
- T850111; Option, Dual streaming
- T199609; Option, Macro mode 50/71/101 µm for 24°
- T130337ACC; Calibration target
- T911630ACC; Power supply for camera, 15 W/3 A
- T911631ACC; USB 2.0 A to USB Type-C cable, 0.9 m
- T911633ACC; Power supply for battery charger
- T911705ACC; USB Type-C to USB Type-C cable (USB 2.0 standard), 1.0 m
- T911706ACC; Car adapter 12 V
- T911845ACC; USB Type-C to HDMI and PD adapter
- T911846ACC; USB 2.0 A to USB Type-C with Power supply
- T300437ACC; Lens case
- T199589; IR lens, f=17 mm (24°) with case
- T199588; IR lens, f=29 mm (14°) with case
- T199590; IR lens, f=10 mm (42°) with case
- T198495; Pouch
- T197771ACC; Bluetooth Headset
- T300244; FLIR Route Creator Plugin for FLIR Thermal Studio Pro, 1 Year Subscription
- T300342; FLIR Screen-EST, Perpetual license
- T300243; FLIR Thermal Studio Pro, 1 Year Subscription
- T300083; FLIR Thermal Studio Pro, Perpetual license
- T300341; FLIR Thermal Studio Standard, 1 Year Subscription
- T300258; FLIR Thermal Studio Standard, Perpetual license
- T198583; FLIR Tools+ (download card incl. license key)
- T198696; FLIR ResearchIR Max 4 (hardware sec. dev.)
- T199013; FLIR ResearchIR Max 4 (printed license key)
- T199043; FLIR ResearchIR Max 4 Upgrade (printed license key)
- INST-EW-0155; Extended Warranty 1 Year for A3xxf, T540, T600/bx, T610, T840, T860
- INST-EWGM-0165; Premium Service Package for T540, T600/bx, T610, T840, T860
- INST-GM-0150; General Maintenance Package for T540, T6xx, T840, T860

# Camera housing



**FLIR**

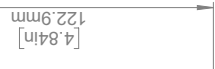
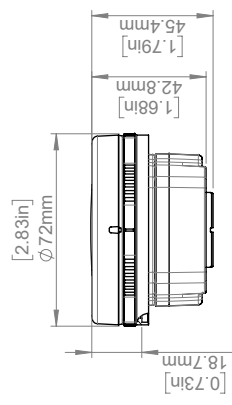
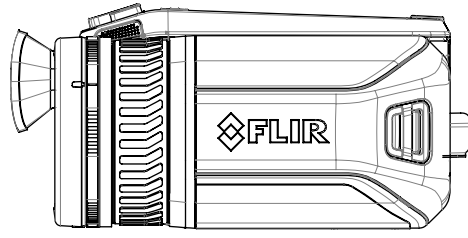
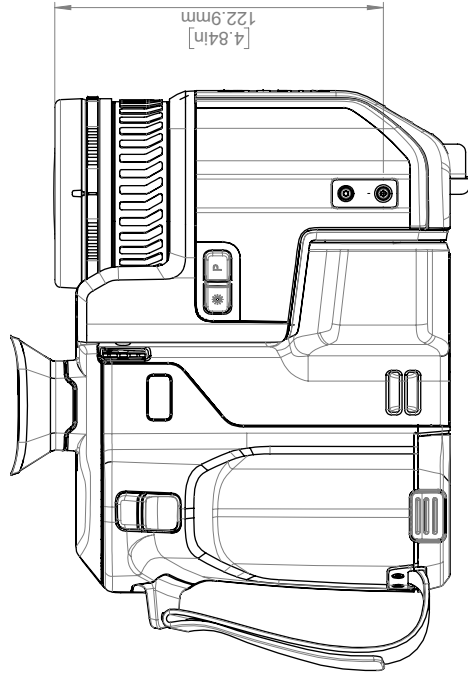
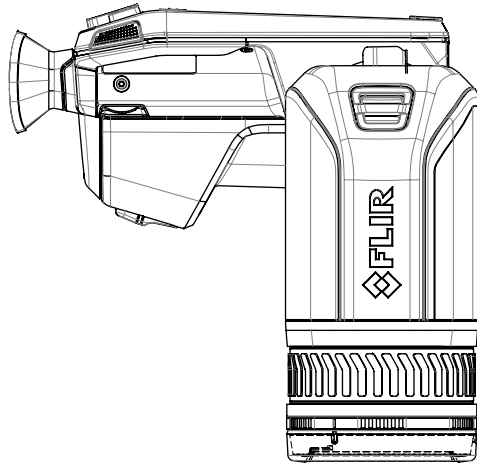
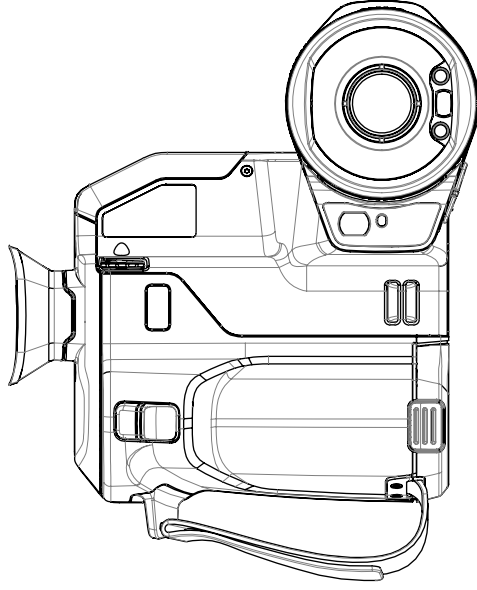
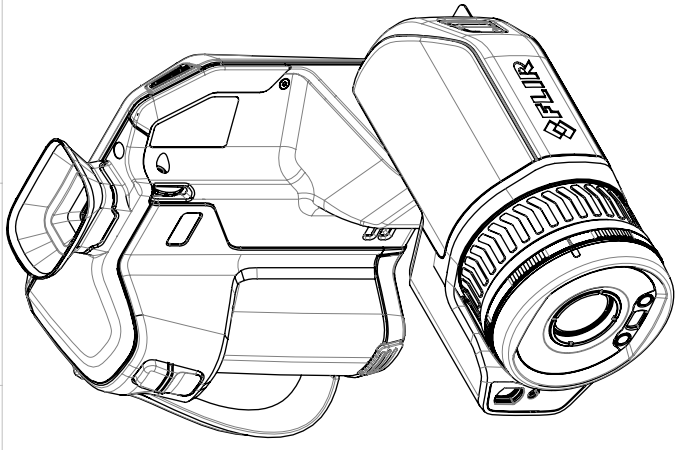
Size: A3  
 Scale: 1:2  
 Drawing No: T129914  
 Rev: C

Modified: 2020-01-14  
 Check: JOHE  
 Drawn by: R&D Instruments  
 Denomination: Basic dimensions FLIR T8xx

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Camera with Lens IR f=10mm (42°)  
 Camera with Lens IR f=17mm (24°)  
 Camera with Lens IR f=29mm (14°)  
 Camera with Lens IR Close-Up lens 2x

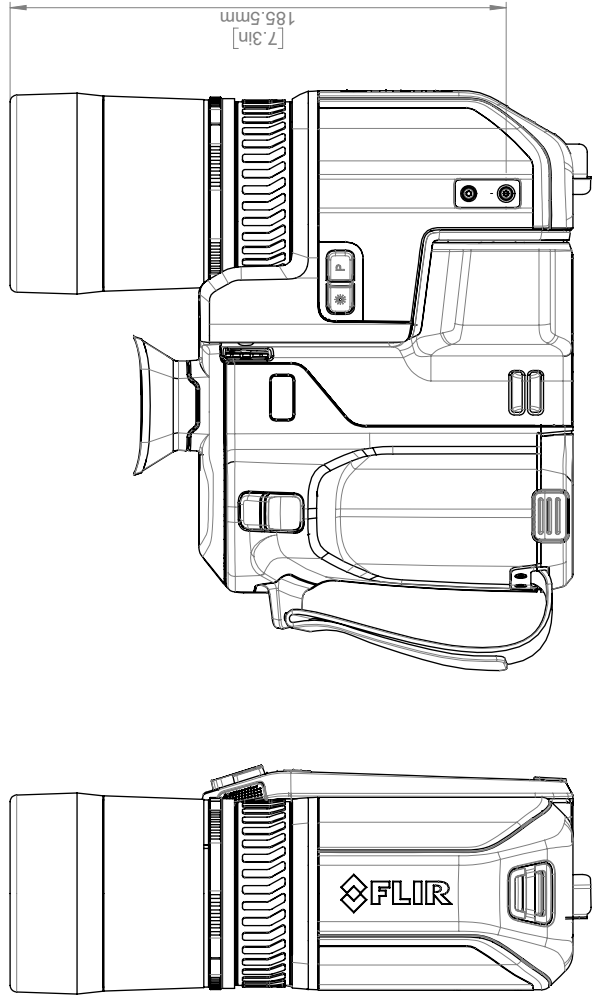
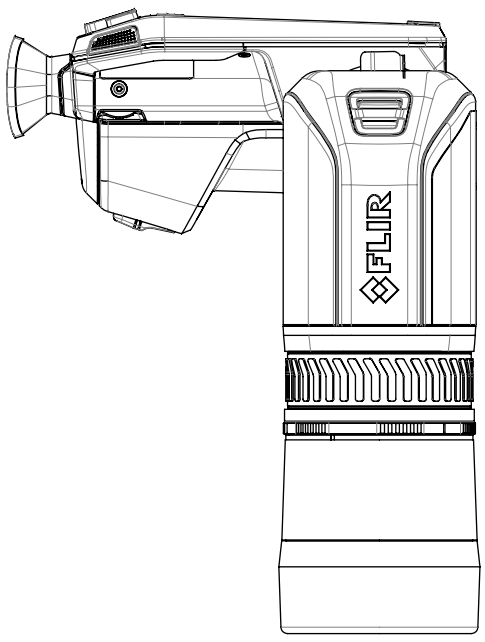
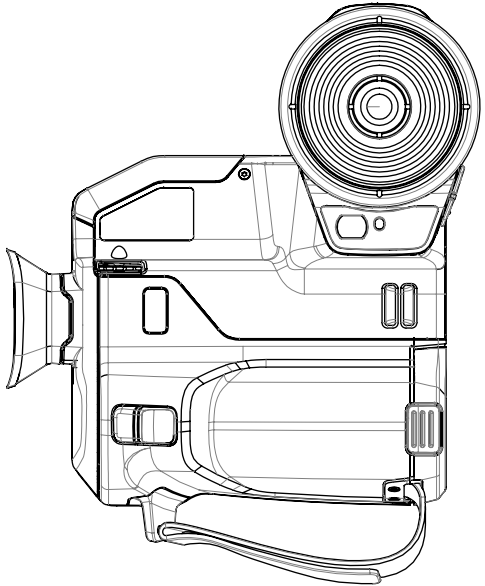
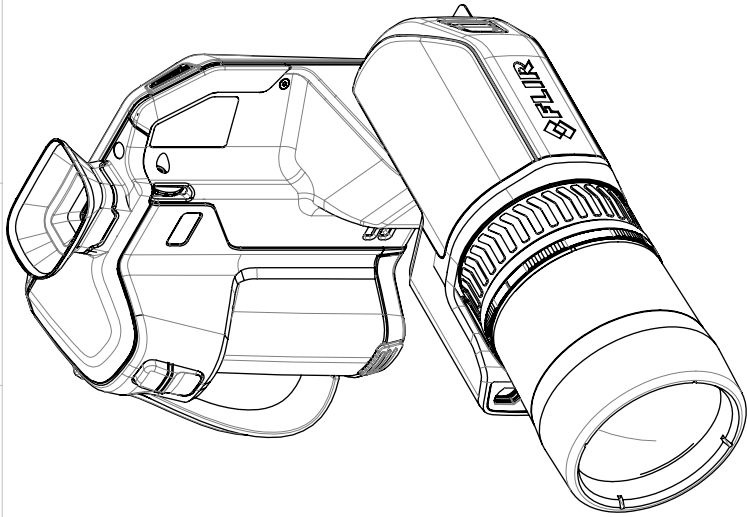


For additional dimensions see page 1

|  |               |                             |              |                        |          |
|--|---------------|-----------------------------|--------------|------------------------|----------|
| Modified<br>2020-01-14<br>Denomination | Check<br>JOHE | Drawn by<br>R&D Instruments | Size<br>A3   | Sheet<br>2(4)          | Rev<br>C |
| Basic dimensions FLIR T8xx             |               |                             | Scale<br>1:5 | Drawing No.<br>T129914 |          |

|  |  |
|--|--|
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# Camera with Lens IR f=70mm (6°)



For additional dimensions see page 1

|  |               |                             |              |                        |          |
|--|---------------|-----------------------------|--------------|------------------------|----------|
| Modified<br>2020-01-14<br>Denomination | Check<br>JOHE | Drawn by<br>R&D Instruments | Size<br>A3   | Sheet<br>3(4)          | Rev<br>C |
| Basic dimensions FLIR T8xx             |               |                             | Scale<br>1:5 | Drawing No.<br>T129914 |          |

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Täby, Sweden May 5, 2021

AQ320246

## CE Declaration of Conformity – EU Declaration of Conformity

**Product:** FLIR T5XX-, T8XX- and GF7X-series

**Name and address of the manufacturer:** FLIR Systems AB  
PO Box 7376  
SE-187 15 Täby, Sweden

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The object of the declaration: FLIR T5XX-, T8XX- and GF7X-series (Product Model Name FLIR-T8210).

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

### Directives

|           |            |   |
|-----------|------------|---|
| Directive | 2012/19/EU | Waste electrical and electric equipment |
| Directive | 2011/65/EU | RoHS and 2015/830/EU (Phtalates)        |
| Directive | 2014/53/EU | Radio Equipment Directive (RED)         |

### Standards

|           |   |   |
|-----------|---|---|
| Emission: | EN 61000-6-3/A1:2011  | EMC – Generic standards   |
| Immunity: | EN 61000-6-2:2005   | Electromagnetic Compability Generic   |
|           | EN 301489-1:2016 v2.1.0   | ERM – EMC for radio equipment   |
|           | EN 301489-17:2012 v2.2.1  | ERM – EMC Wideband data   |
| EMC Radio | ETSI EN 301 489-17 v3.2.0   | EMC for radio, broadband data transmission                                      |
| RoHS:     | EN 50581:2012   | Technical documentation   |
| Radio:    | ETSI EN 300 328 v2.1.1  | Harmonized EN covering essential requirements of the R&TTE Directive            |
|           | ETSI EN 301 893 v.2.1.1   | 5GHz WLAN   |
| Safety:   | IEC 62368-1:2014 Ed 2 and Cor. 1:2015, EN 62368-1:2014/AC:2015/A11:2017 | Audio/video, information and communication technology equipment, Part 1: Safety |

**FLIR Systems AB**  
Quality Assurance



Lea Dabiri  
Quality Manager