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P/N: 64501-0302

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General description

The FLIR Exx-Series is a compact and rugged infrared camera that can be used in harsh environments while still providing you with the latest technology such as a modern touchscreen and wireless connectivity. The Exx-Series is the perfect choice when you are looking for a robust but feature-rich camera at an affordable price.

Benefits:

- Robust and sophisticated: The Exx-Series has a robust and light-weight design and can withstand a 2 meter drop. Big buttons combined with a modern touch screen and broad measuring capabilities, it is the right choice for demanding inspections in the field.
- Easy communication: The Wi-Fi connectivity of the FLIR Exx allows you to connect to smart phones and tablet PCs, for the wireless transfer of images or remote control of the camera. The Bluetooth-based MeterLink® function transfers readings from external measurement instruments to the infrared image.
- Best value for money: The FLIR Exx-Series combines good performance (up to 320 × 240 pixels), a user-friendly interface, and a rugged point-and-shoot design with an affordable price.

Imaging and optical data

| | |
|--------------------------|----------------------------------|
| IR resolution | 320 × 240 pixels |
| Thermal sensitivity/NETD | < 0.05°C @ +30°C (+86°F) / 50 mK |

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| Imaging and optical data | |
|------------------------------------|---|
| Field of view (FOV) | 25° × 19° |
| Minimum focus distance | 0.4 m (1.31 ft.) |
| Focal length | 18 mm (0.7 in.) |
| Spatial resolution (IFOV) | 1.36 mrad |
| F-number | 1.3 |
| Image frequency | 60 Hz |
| Focus | Manual |
| Digital zoom | 2× and 4× |
| Panning | Panning over zoomed-in images |
| Detector data | |
| Detector type | Focal plane array (FPA), uncooled microbolometer |
| Spectral range | 7.5–13 μm |
| Image presentation | |
| Display | Touch screen, 3.5 in. LCD, 320 × 240 pixels |
| Image adjustment | Auto or manual |
| Image presentation modes | |
| Image modes | IR image, visual image, MSX, picture in picture, thumbnail gallery |
| Picture in Picture | Scalable IR area on visual image |
| Measurement | |
| Object temperature range | –20°C to +120°C (–4°F to +248°F) 0°C to +650°C (+32°F to +1202°F) |
| Accuracy | ±2°C (±3.6°F) or ±2% of reading, for ambient temperature 10°C to 35°C (+50°F to 95°F) |
| Measurement analysis | |
| Spotmeter | 3 |
| Area | 3 boxes with max./min./average |
| Automatic hot/cold detection | Auto hot or cold spotmeter markers within area |
| Difference temperature | Delta temperature between measurement functions or reference temperature |
| Reference temperature | Manually set or captured from any measurement function |
| Emissivity correction | Variable from 0.01 to 1.0 or selected from materials list |
| External optics/windows correction | Automatic, based on inputs of optics/window transmission and temperature |
| Measurement corrections | Reflected temperature, optics transmission and atmospheric transmission |

P/N: 64501-0302

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| Set-up | |
|------------------------------------|--|
| Color palettes | Arctic, Gray, Iron, Lava, Rainbow and Rainbow HC |
| Set-up commands | Local adaptation of units, language, date and time formats |
| Storage of images | |
| Image storage | Standard JPEG, including measurement data, on memory card |
| Image storage mode | Simultaneous storage of images in IR, visual and MSX |
| Image annotations | |
| Voice | 60 seconds (via Bluetooth) |
| Text | Text from predefined list or soft keyboard on touch screen |
| Meterlink | Wireless connection (Bluetooth®) to: FLIR meters with MeterLink |
| Report generation | <ul style="list-style-type: none"> FLIR Tools software specifically designed to provide an easy way to create inspection reports. It is available on the major platforms – Android, Windows, MacOS and iOS. |
| Video recording in camera | |
| Non-radiometric IR-video recording | MPEG-4 to memory card |
| Video streaming | |
| Radiometric IR-video streaming | Full dynamic to PC using USB |
| Non-radiometric IR-video streaming | Uncompressed colorized video using USB |
| Digital camera | |
| Built-in digital camera | 3.1 Mpixel (2048 × 1536 pixels), and one LED light |
| Digital camera, focus | Fixed focus |
| Built-in digital lens data | FOV 53° × 41° |
| Digital camera, aspect ratio | 4:3 |
| Laser pointer | |
| Laser | Activated by dedicated button |
| Laser alignment | Position is automatic displayed on the IR image |
| Laser classification | Class 2 |
| Laser type | Semiconductor AlGaInP diode laser |
| Laser power | 1 mW |
| Laser wavelength | 635 nm (red) |

P/N: 64501-0302

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| Data communication interfaces | |
|-------------------------------|---|
| Wi-Fi | Peer to peer (ad-hoc) or infrastructure (network) |
| SD Card | One card slot for removable SD memory cards |
| Audio | Microphone headset via Bluetooth for voice annotation of images |

| USB | |
|---------------------|---|
| USB | <ul style="list-style-type: none"> • USB-A: Connect external USB device • USB Mini-B: Data transfer to and from PC / Uncompressed colorized video |
| USB, standard | USB Mini-B: 2.0 |
| USB, connector type | <ul style="list-style-type: none"> • USB-A connector • USB Mini-B connector |

| Composite video | |
|-----------------------|---|
| Video out | Composite |
| Video, standard | CVBS (ITU-R-BT.470 PAL/SMPTE 170M NTSC) |
| Video, connector type | 4-pole 3.5 mm jack |

| Radio | |
|-----------|--|
| Wi-Fi | Standard: 802.11 b/g Frequency range: 2412–2462 MHz Max output power: 15 dBm |
| Bluetooth | Frequency range: 2402–2480 MHz |
| Antenna | Internal |

| Power system | |
|-------------------------------|--|
| Battery type | Rechargeable Li Ion battery |
| Battery voltage | 3.7 V |
| Battery capacity | 4.4 Ah, at +20°C to +25°C (+68°F to +77°F) |
| Battery operating time | Approx. 4 hours at +25°C (+77°F) ambient temperature and typical use |
| Charging system | In camera (AC adapter or 12 V from a vehicle) or 2-bay charger |
| Charging time | 4 h to 90% capacity, charging status indicated by LED's |
| Charging temperature | 0°C to +45°C (+32°F to +113°F) |
| Power management | Automatic shutdown and sleep mode (user selectable) |
| AC operation | AC adapter, 90–260 VAC input, 12 V output to camera |
| Start-up time from sleep mode | Instant on |

| Environmental data | |
|----------------------------------|---|
| Operating temperature range | –15°C to +50°C (+5°F to +122°F) |
| Storage temperature range | –40°C to +70°C (–40°F to +158°F) |
| Humidity (operating and storage) | IEC 60068-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F) / 2 cycles |

P/N: 64501-0302

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| Environmental data | |
|---|--|
| EMC | <ul style="list-style-type: none"> ETSI EN 301 489-1 (radio) ETSI EN 301 489-17 EN 61000-6-2 (Immunity) EN 61000-6-3 (Emission) FCC 47 CFR Part 15 B (Emission) ICES-003 |
| Radio spectrum | <ul style="list-style-type: none"> ETSI EN 300 328 FCC Part 15.247 RSS-210 |
| Magnetic fields | EN 61 000-4-8, Test level 5 for continuous field (Severe industrial environment) |
| Encapsulation | IP 54 (IEC 60529) |
| Bump | 25 g (IEC 60068-2-29) |
| Vibration | 2 g (IEC 60068-2-6) |
| Safety | EN/UL/CSA/PSE 60950-1 |
| Physical data | |
| Camera weight, incl. battery | 0.880 kg (1.94 lb.) |
| Camera size (L x W x H) | 246 x 97 x 184 mm (9.7 x 3.8 x 7.2 in.) |
| Tripod mounting | UNC ¼"-20 (adapter needed) |
| Material | Polycarbonate + acrylonitrile butadiene styrene (PC-ABS) Thixomold magnesium Thermoplastic elastomer (TPE) |
| Color | Graphite gray and black |
| Shipping information | |
| <ul style="list-style-type: none"> Hard transport case Infrared camera with lens Battery (2 ea.) Battery charger FLIR Tools download card Handstrap Memory card Power supply, incl. multi-plugs Printed documentation USB cable User documentation CD-ROM Video cable | |
| Packaging, weight | 5.0 kg (11.02 lb.) |
| Packaging, size | 500 x 350 x 190 mm (19.7 x 13.8 x 7.5 in.) |
| EAN-13 | 4743254001152 |
| UPC-12 | 845188005184 |

Supplies & accessories:

- 1196961; IR lens, f = 30 mm, 15° incl. case
- 1196960; IR lens, f = 10 mm, 45° incl. case
- T910814; Power supply, incl. multi plugs
- T911230ACC; Memory card SDHC 4 GB
- 1910423; USB cable Std A <-> Mini-B

P/N: 64501-0302

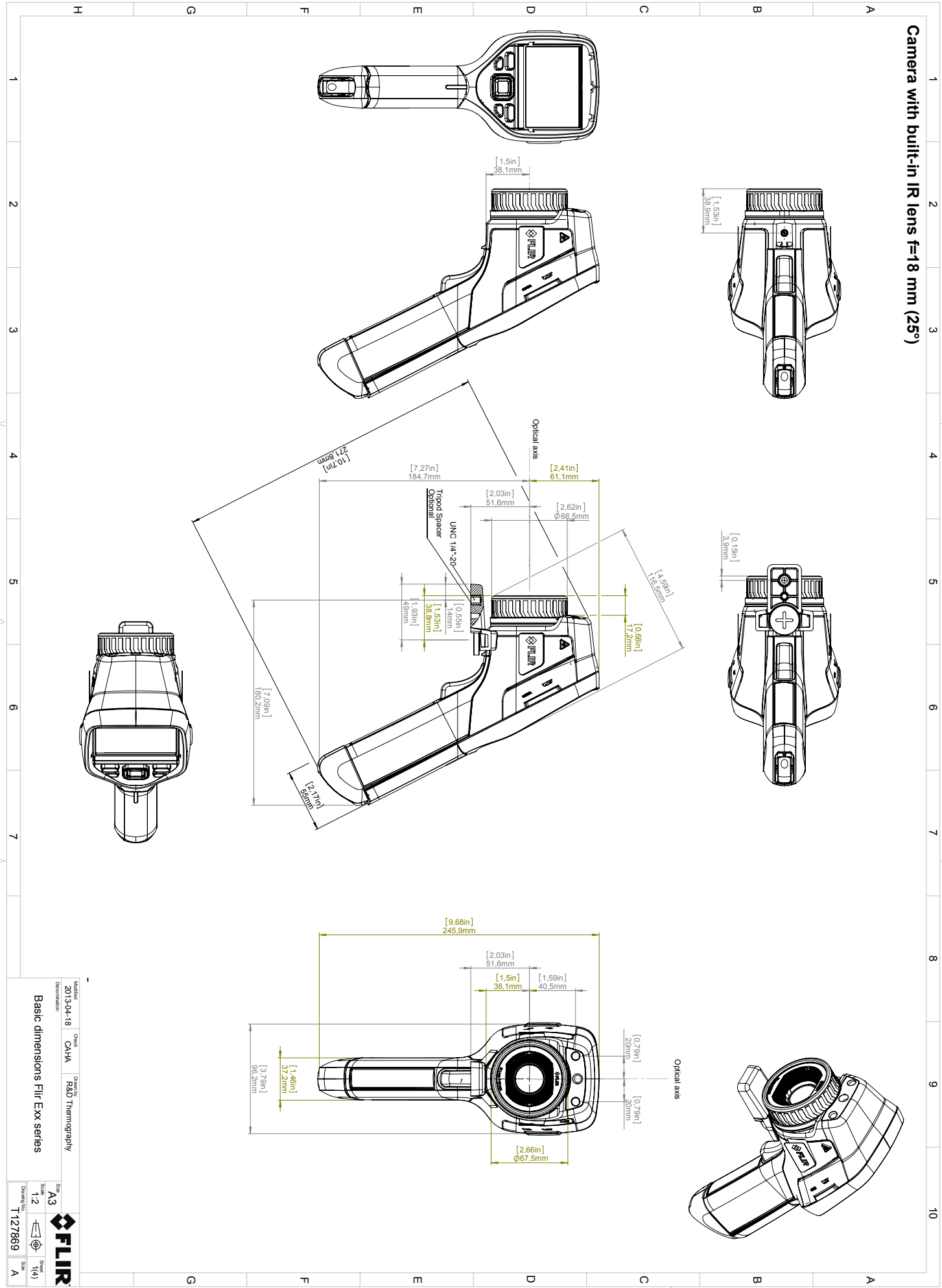
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- T198509; Cigarette lighter adapter kit, 12 VDC, 1.2 m/3.9 ft.
- 1910582ACC; Video cable
- T197771ACC; Bluetooth Headset
- T910972; EX845: Clamp meter + IR therm TRMS 1000A AC/DC
- T910973; MO297: Moisture meter, pinless with memory
- T911093; Tool belt
- T198125; Battery charger, incl. power supply with multi plugs Exx
- T198113; IR lens, 76 mm (6°) with case and mounting support for Exx
- T198487; Li-Ion Battery pack 3.7V 17Wh
- T198484; Pouch for FLIR Exx series
- T198486; Tripod Adapter
- T198485; Sun shield
- T198341ACC; Transport case Exx
- T198586; FLIR Reporter Professional (license only)
- T198584; FLIR Tools
- T198583; FLIR Tools+ (license only)
- DSW-10000; FLIR IR Camera Player
- APP-10002; FLIR Tools Mobile (Android Application)
- APP-10004; FLIR Tools (MacOS Application)
- T127597L5; FLIR ResearchIR 3 (license only), 5 user licenses
- T127597L10; FLIR ResearchIR 3 (license only), 10 user licenses
- T127598L5; FLIR ResearchIR 3 Max (license only), 5 user licenses
- T127598L10; FLIR ResearchIR 3 Max (license only), 10 user licenses
- T198696; FLIR ResearchIR Max 4
- T198697; FLIR ResearchIR Max + HSDR 4
- T198579; FLIR ResearchIR 3 (CD)
- T198578; FLIR ResearchIR 3 (license only)
- T198575; FLIR ResearchIR 3 Max (CD)
- T198574; FLIR ResearchIR 3 Max (license only)
- T198292; Upgrade previous version to FLIR ResearchIR 3
- T198291; Upgrade previous version to FLIR ResearchIR 3 Max
- T198290; Upgrade FLIR ResearchIR 3 to FLIR ResearchIR 3 Max

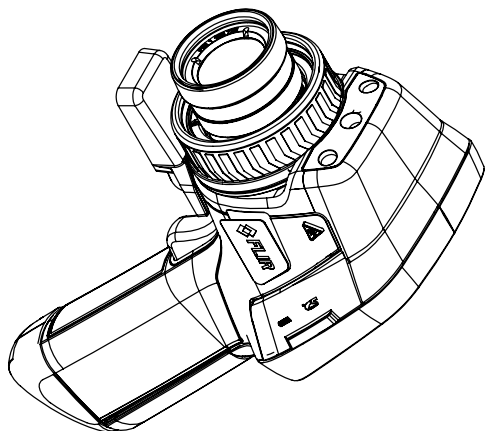
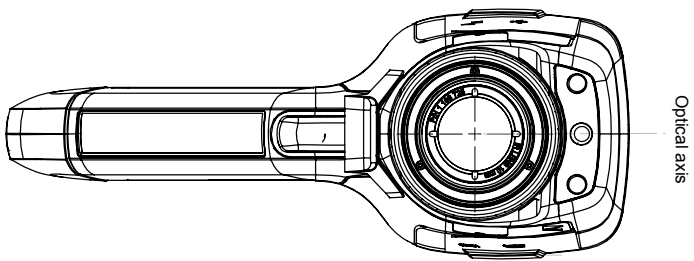
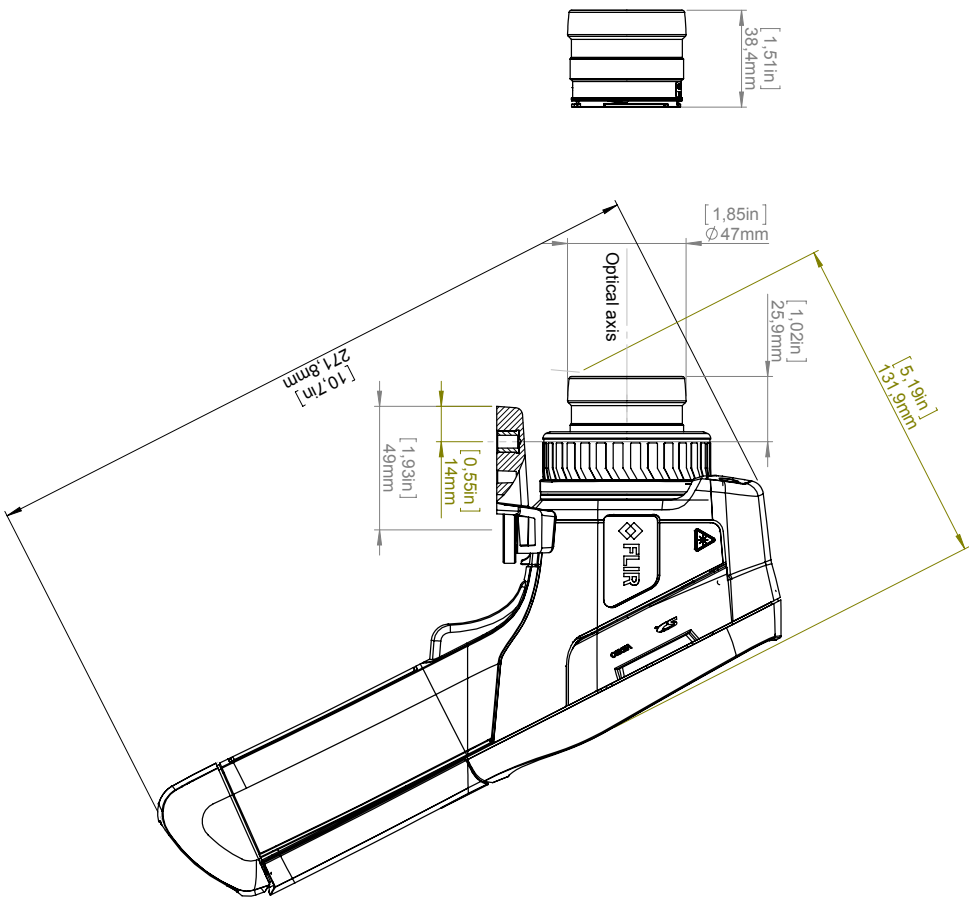
Camera with built-in IR lens f=18 mm (25°)

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Model No. 20113-04-18
 Designation CAHA
 Drawn By R&D Thermography
 Checked By CAHA
 Title Basic dimensions Flir Exx series
 Size A3
 Scale 1:2
 Sheet 1(4)
 Drawing No. T127869
 Size A

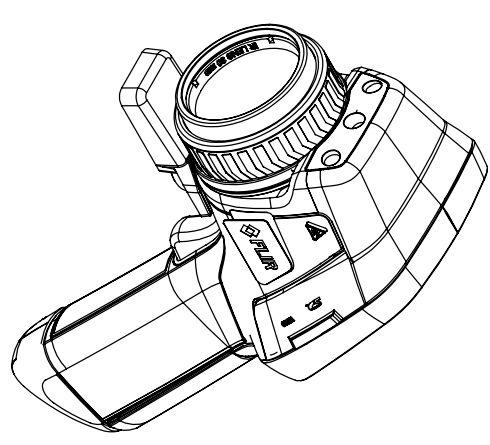
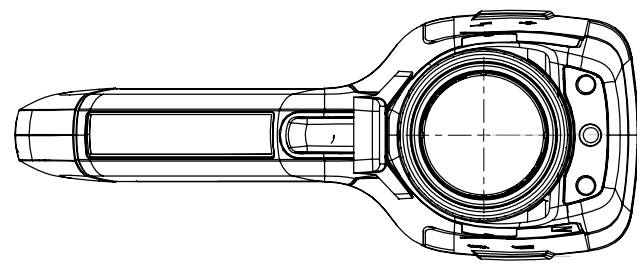
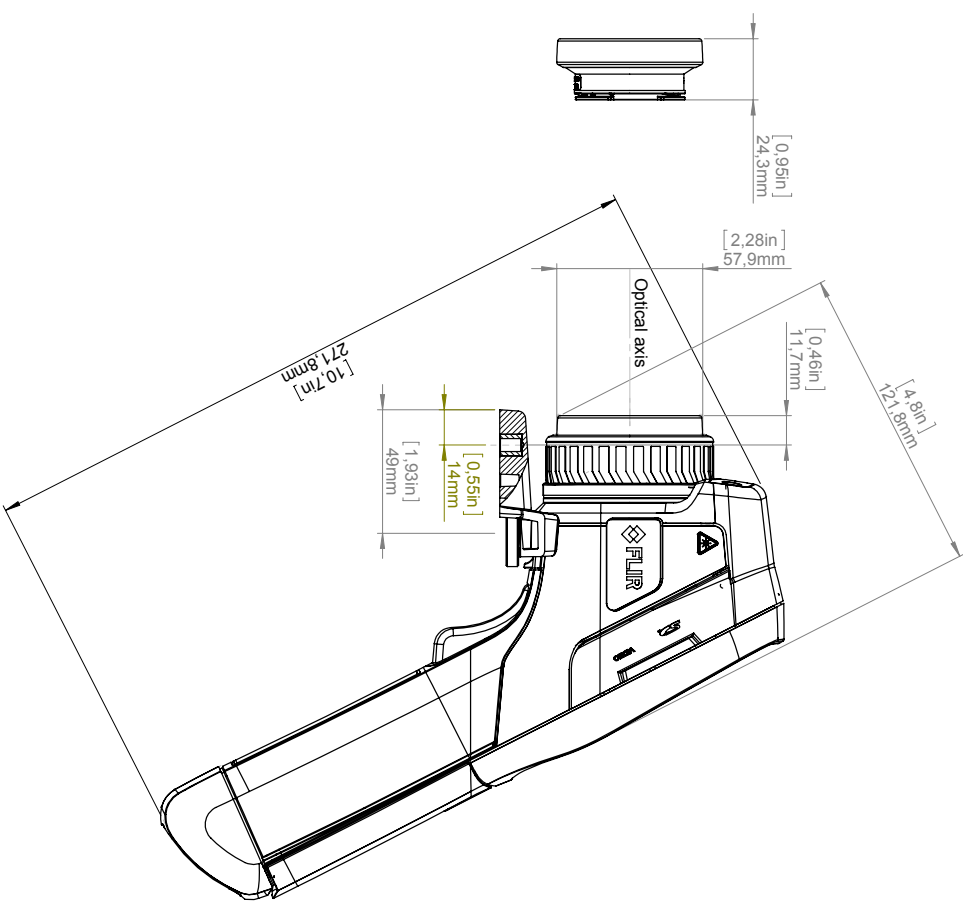
Camera with Lens IR f=10 mm (45°)



| | | | |
|---|--------------|--------------------------------------|------------------------------|
| Modified 2013-04-18 | | Check CAHA | Drawn by R&D Thermography |
| Denomination Basic dimensions Flir Exx series | | | |
| Size A3 | Scale 1:2 | Sheet 2(4) | Sheet A |
| Drawing No. T127869 | | For additional dimensions see page 1 | |



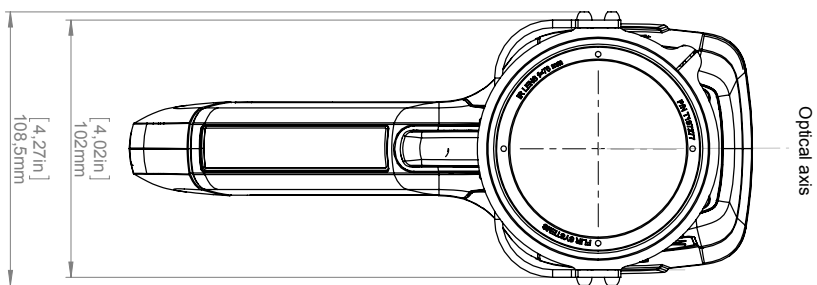
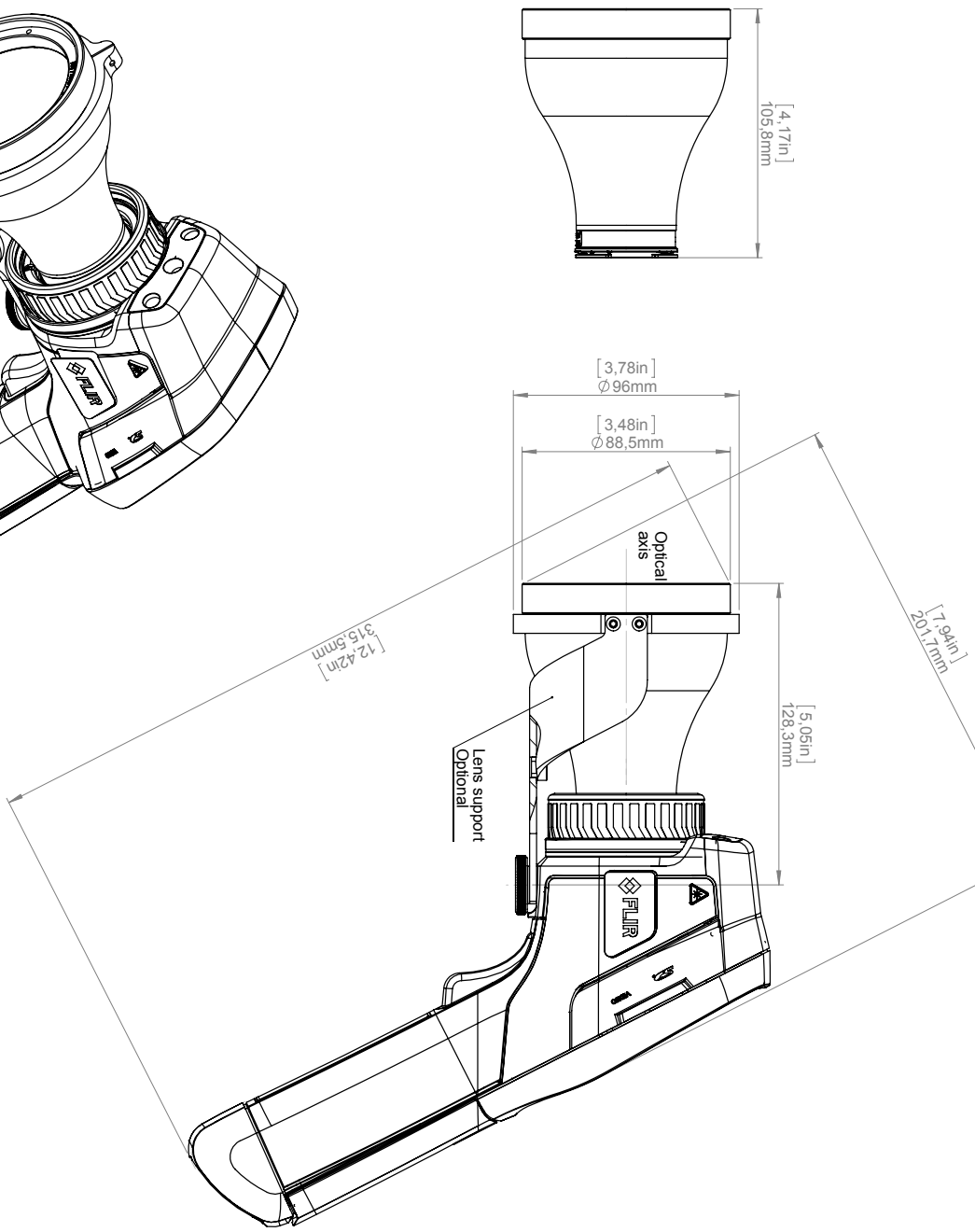
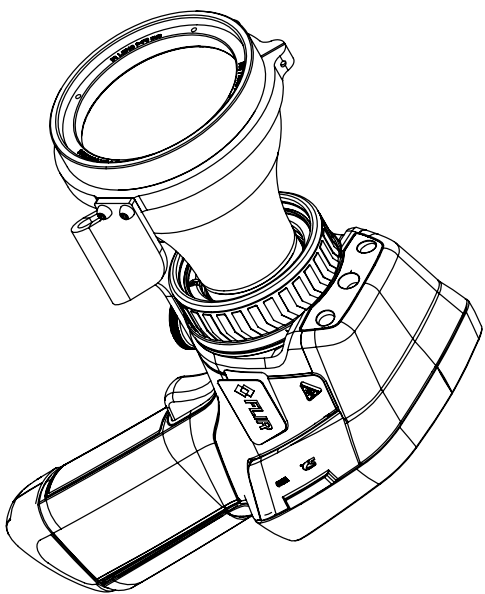
Camera with Lens IR f=30 mm (15°)



For additional dimensions see page 1

| | | |
|----------------------------------|---------------|------------------------------|
| Modified 2013-04-18 | Check CAHA | Drawn by R&D Thermography |
| Basic dimensions Flir Exx series | | |
| Size A3 | Scale 1:2 | Sheet 3(4) |
| Drawing No. T127869 | Size A | |

Camera with Lens IR f=76 mm (6°) incl support



| | | | |
|---|---------------|------------------------------|---------------|
| Modified 2013-04-18 | Check CAHA | Drawn by R&D Thermography | |
| Denomination Basic dimensions Flir Exx series | | | |
| Size A3 | Scale 1:2 | Drawing No. T127869 | Sheet 4(4) |
| For additional dimensions see page 1 | | | Size A |