

## P/N: 48201-1201

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### General description

The FLIR A320 Tempscreen is a camera preconfigured to work well in applications where you want to find temperature deviations in a population of people, utilizing difference temperature alarms with a dynamically updated reference temperature.

In addition, the FLIR A320 Tempscreen offers an affordable and accurate temperature measurement solution for anyone who needs to solve problems that need built in "smartness" such as analysis, alarm functionality and autonomous communication using standard protocols. The FLIR A320 Tempscreen also has all the necessary features and functions to build distributed single- or multi-camera solutions utilizing standard Ethernet hardware and software protocols.

### Key features:

- Screening: difference temperature alarm with a dynamic updated reference temperature (visualized by the isotherm).
- Built-in extensive analysis functionality.
- Extensive alarm functionality, as a function of analysis and more.
- On schedule: file sending (FTP) or e-mail (SMTP) of analysis results or images.
- On alarms: file sending (FTP) or e-mail (SMTP) of analysis results or images.
- MPEG-4 streaming.
- PoE (Power over Ethernet).
- Built-in web server.
- General purpose I/O.
- 100 Mbps Ethernet (100 m cable, wireless, fiber, etc.).
- Synchronization through SNTP.
- Composite video output.
- Multi-camera utility software: FLIR IP Config and FLIR IR Monitor included.
- Open and well-described TCP/IP protocol for control and set-up.
- 16-bit 320 × 240 pixel images semi-real time, signal and temperature linear.
- Lenses: 25° included, 15° and 45° optional.

### Typical applications:

- Safety with temperature alarms (multi-camera applications), fire prevention, critical vessel monitoring, and power utility asset management.
- Volume-oriented industrial control (multi-camera installation is possible).

### Imaging and optical data

IR resolution	320 × 240 pixels
Thermal sensitivity/NETD	< 0.05°C @ +30°C (+86°F) / 50 mK
Field of view (FOV)	25° × 18.8°
Minimum focus distance	0.4 m (1.31 ft.)
Focal length	18 mm (0.7 in.)
Spatial resolution (IFOV)	1.36 mrad
Lens identification	Automatic
F-number	1.3
Image frequency	30 Hz



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Imaging and optical data	
Focus	Automatic or manual (built in motor)
Zoom	1–8× continuous, digital, interpolating zooming on images

Detector data	
Detector type	Focal plane array (FPA), uncooled microbolometer
Spectral range	7.5–13 μm
Detector pitch	25 μm
Detector time constant	Typical 12 ms

Measurement	
Object temperature range	<ul style="list-style-type: none"> <li>• -20 to +120°C (-4 to +248°F)</li> <li>• 0 to +350°C (+32 to +662°F)</li> </ul>
Accuracy	±2°C (±3.6°F) or ±2% of reading

Measurement analysis	
Spotmeter	4
Area	4 boxes with max./min./average/position
Isotherm	1 with above/below/interval
Measurement option	Measurement Mask Filter Schedule response: File sending (ftp), email (SMTP)
Difference temperature	Delta temperature between measurement functions or reference temperature
Reference temperature	Manually set or captured from any measurement function
Atmospheric transmission correction	Automatic, based on inputs for distance, atmospheric temperature and relative humidity
Optics transmission correction	Automatic, based on signals from internal sensors
Emissivity correction	Variable from 0.01 to 1.0
Reflected apparent temperature correction	Automatic, based on input of reflected temperature
External optics/windows correction	Automatic, based on input of optics/window transmission and temperature
Measurement corrections	Global and individual object parameters

Alarm	
Alarm functions	6 automatic alarms on any selected measurement function, Digital In, Camera temperature, timer
Screening	Difference temperature alarm with dynamic updated reference temperature (visualized by the isotherm)
Alarm output	Digital Out, log, store image, file sending (ftp), email (SMTP), notification

Set-up	
Color palettes	Color palettes (BW, BW inv, Iron, Rain)
Set-up commands	Date/time, Temperature (°C/°F)



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#48201-1201; r. /23380; en-US

Storage of images	
Storage media	Built-in memory for image storage
File formats	Standard JPEG, 16-bit measurement data included

Ethernet	
Ethernet	Control, result and image
Ethernet, type	100 Mbps
Ethernet, standard	IEEE 802.3
Ethernet, connector type	RJ-45
Ethernet, communication	TCP/IP socket-based FLIR proprietary
Ethernet, video streaming	MPEG-4, ISO/IEC 14496-1 MPEG-4 ASP@L5
Ethernet, image streaming	16-bit 320 × 240 pixels <ul style="list-style-type: none"> <li>• Signal linear</li> <li>• Temperature linear</li> <li>• Radiometric</li> </ul>
Ethernet, power	Power over Ethernet, PoE IEEE 802.3af class 0. NOTE: In cameras manufactured before 2013, due to an error in the implementation of power over Ethernet, in some rare cases the camera will not be powered. In such cases, power the camera using the external power cable, or modify the camera according to Service bulletin SB14-006. For modification, please contact your local service department. See <a href="http://support.flir.com/service">http://support.flir.com/service</a> for contact details.
Ethernet, protocols	TCP, UDP, SNMP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, SMTP, SMB (CIFS), DHCP, MDNS (Bonjour), uPnP

Digital input/output	
Digital input, purpose	Image tag (start/stop/general), Input ext. device (programmatically read)
Digital input	2 opto-isolated, 10–30 VDC
Digital output, purpose	As function of ALARM, Output to ext. device (programmatically set)
Digital output	2 opto-isolated, 10–30 VDC, max. 100 mA
Digital I/O, isolation voltage	500 VRMS
Digital I/O, supply voltage	12/24 VDC, max. 200 mA
Digital I/O, connector type	6-pole jackable screw terminal

Composite video	
Video out	Composite video output, PAL and NTSC compatible
Video, standard	CVBS (ITU-R-BT.470 PAL/SMPTE 170M NTSC)
Video, connector type	Standard BNC connector

Power system	
External power operation	12/24 VDC, 24 W absolute max.
External power, connector type	2-pole jackable screw terminal
Voltage	Allowed range 10–30 VDC

P/N: 48201-1201

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#48201-1201; r. /23380; en-US

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)
EMC	<ul style="list-style-type: none"> <li>EN 61000-6-2:2001 (Immunity)</li> <li>EN 61000-6-3:2001 (Emission)</li> <li>FCC 47 CFR Part 15 Class B (Emission)</li> </ul>
Encapsulation	IP 40 (IEC 60529)
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)

Physical data	
Weight	0.7 kg (1.54 lb.)
Camera size (L x W x H)	170 x 70 x 70 mm (6.7 x 2.8 x 2.8 in.)
Tripod mounting	UNC ¼"-20 (on three sides)
Base mounting	2 x M4 thread mounting holes (on three sides)
Housing material	Aluminum

Shipping information	
Packaging, type	Cardboard box
List of contents	<ul style="list-style-type: none"> <li>Infrared camera with lens</li> <li>Ethernet cable</li> <li>FLIR Tools download card</li> <li>Mains cable</li> <li>Power cable, pig-tailed</li> <li>Power supply</li> <li>Printed documentation</li> <li>User documentation CD-ROM</li> <li>Utility CD-ROM</li> </ul>
Packaging, weight	
Packaging, size	495 x 370 x 192 mm (19.5 x 14.6 x 7.6 in.)
EAN-13	7332558003398
UPC-12	845188003142
Country of origin	Sweden

### Supplies & accessories:

- 1196961; IR lens, f = 30 mm, 15° incl. case
- 1196960; IR lens, f = 10 mm, 45° incl. case
- T197215; Close-up 4x (100 µm) incl. case
- T197214; Close-up 2x (50 µm) incl. case
- T197407; IR lens, 76 mm (6°) with case and mounting support for A3xx, A3xxsc
- T197411; IR lens, 4 mm (90°) with case and mounting support for A3xx, A3xxsc
- T197415; Close-up 1x (25 µm) incl. case and mounting support for A3xx, A3xxsc
- T197000; High temp. option +1200°C/+2192°F for FLIR T/B2xx to T/B4xx and A3xx, A3xxf, A3xxpt, A3xxsc series
- 1910400; Power cord EU
- 1910401; Power cord US
- 1910402; Power cord UK
- T910922; Power supply, incl. multi plugs, for A3xx, A3xxsc, A6xx and A6xxsc
- T911182; Power supply for A3xx f, IP66
- 908929; Video cable, 3.0 m/9.8 ft.
- T951004ACC; Ethernet cable CAT-6, 2m/6.6 ft.



## FLIR A320 Tempscreen

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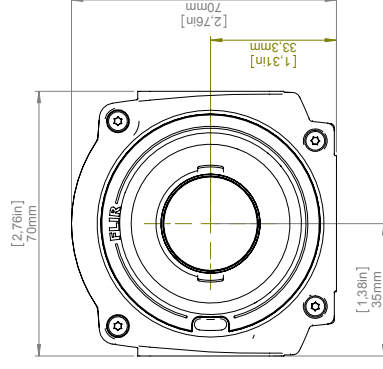
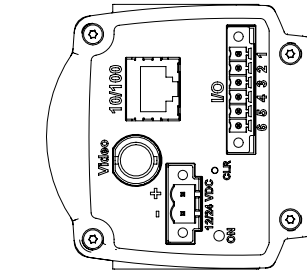
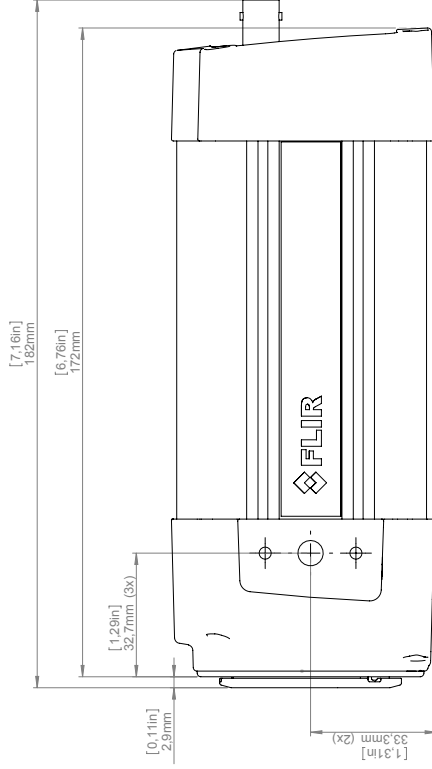
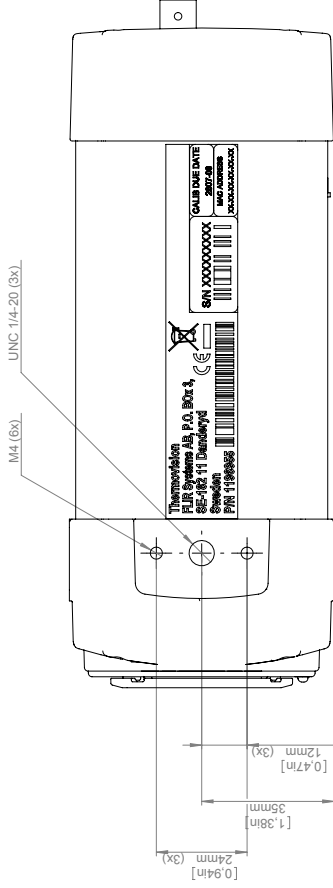
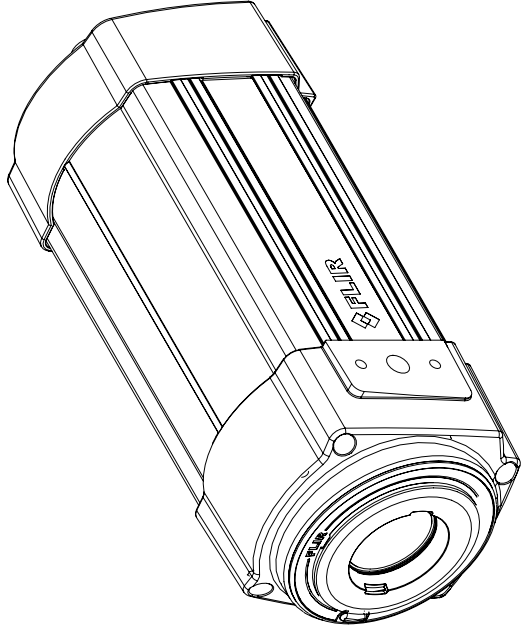
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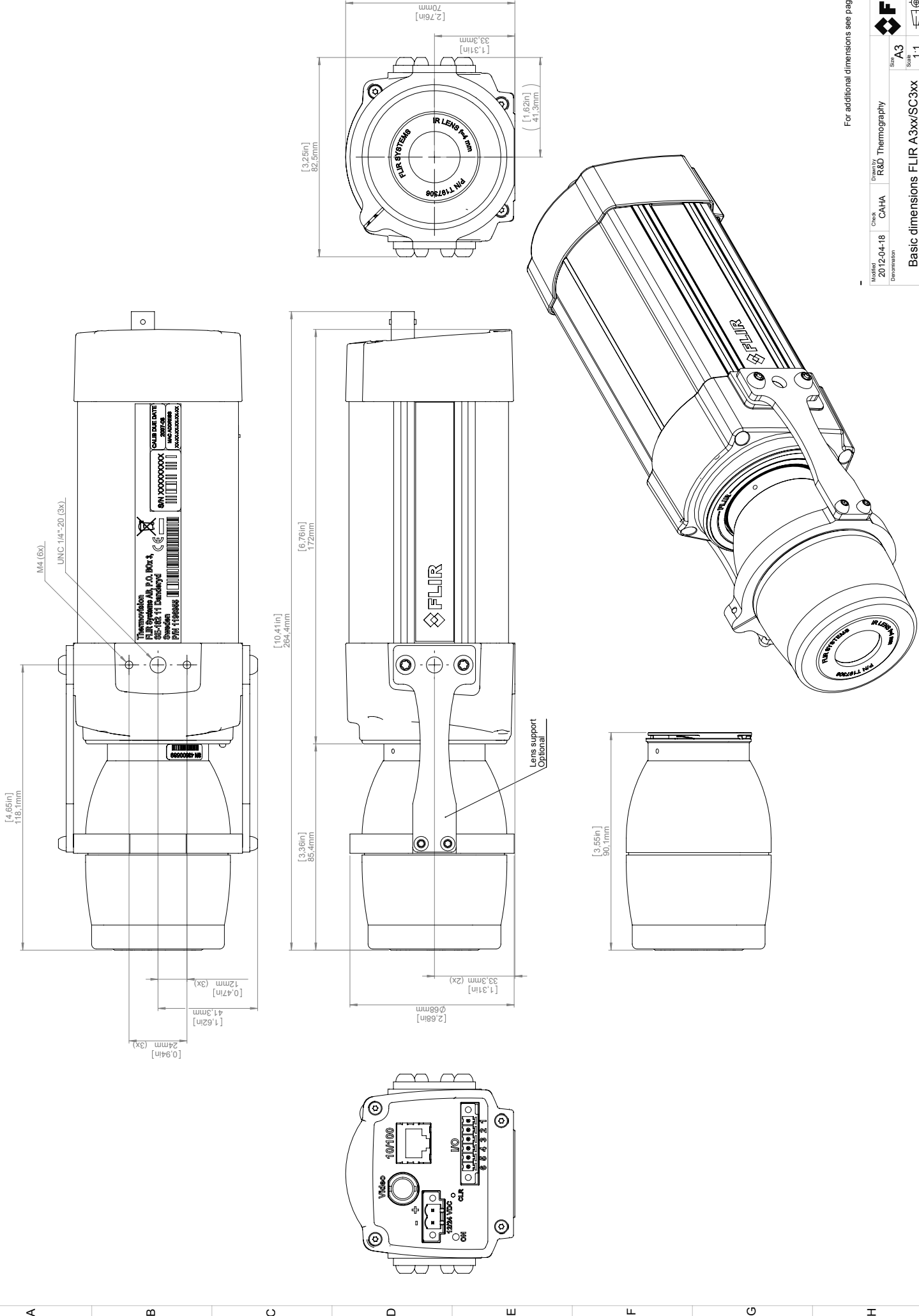
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- 1910586ACC; Power cable, pigtailed
- T197871ACC; Hard transport case for A3xx/A6xx series
- T197870ACC; Cardboard box for A3xx/A6xx series
- T198584; FLIR Tools
- T198583; FLIR Tools+ (license only)
- DSW-10000; FLIR IR Camera Player
- APP-10002; FLIR Tools Mobile (Android Application)
- T198578; FLIR ResearchIR 3 (license only)
- T198574; FLIR ResearchIR 3 Max (license only)
- T198697; FLIR ResearchIR Max + HSDR 4
- T198696; FLIR ResearchIR Max 4
- T198731; FLIR ResearchIR Standard 4
- T198567; ThermoVision™ System Developers Kit Ver. 2.6
- T198566; ThermoVision™ LabVIEW® Digital Toolkit Ver. 3.3

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



# Camera with Lens IR f=4 mm (90°) incl support



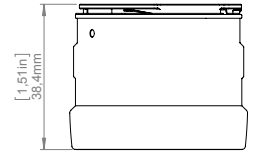
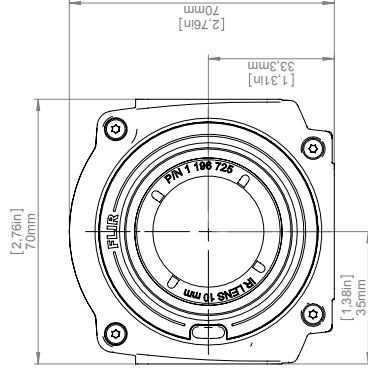
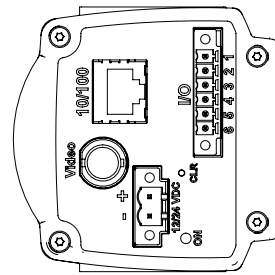
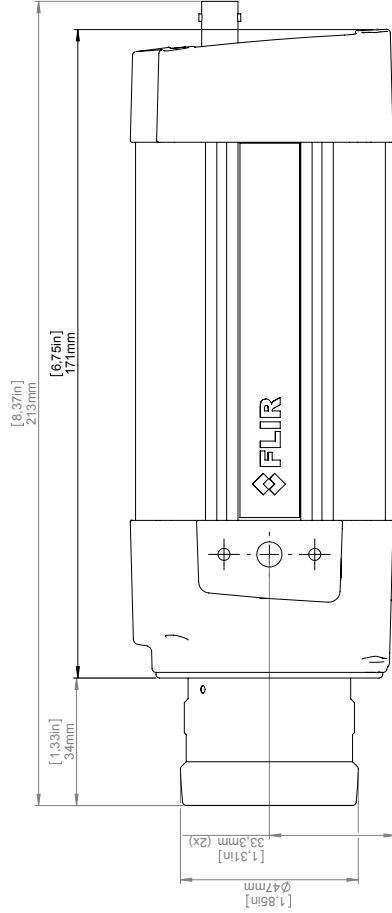
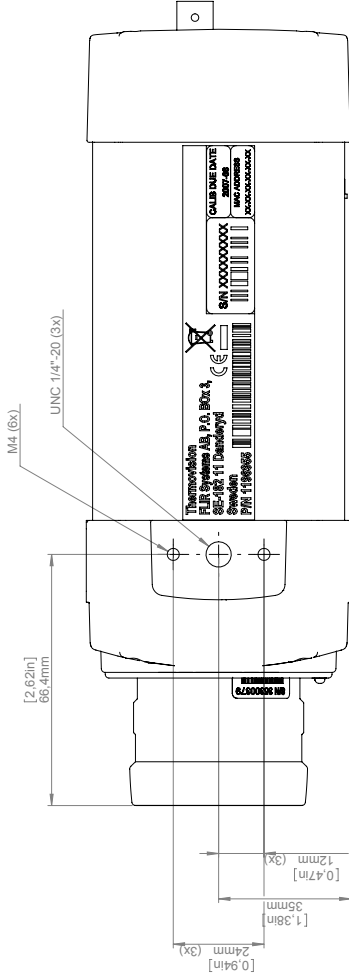
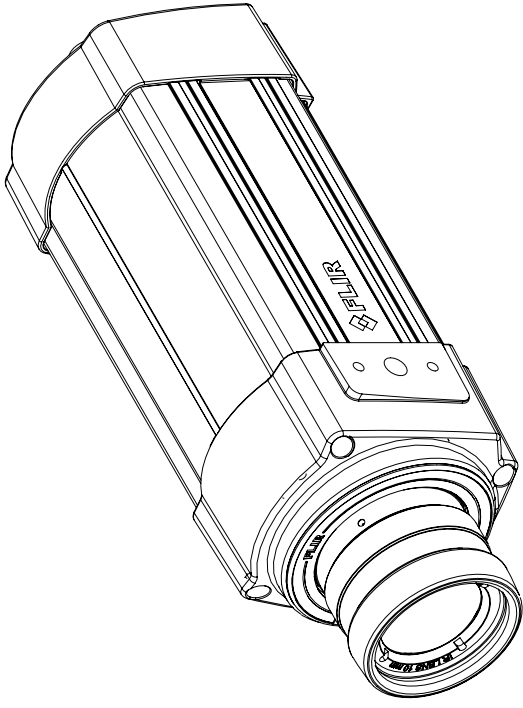
For additional dimensions see page 1

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Denomination												Drawn No.	T125002
Basic dimensions FLIR A3xx/SC3xx													



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# Camera with Lens IR f=10 mm (45°)



For additional dimensions see page 1

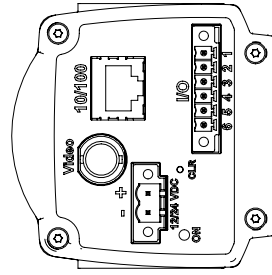
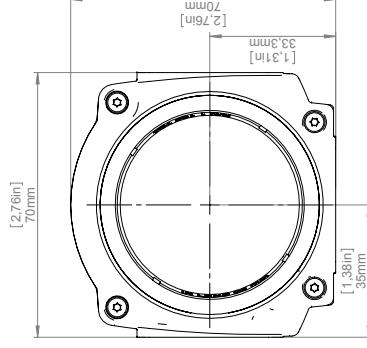
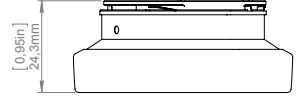
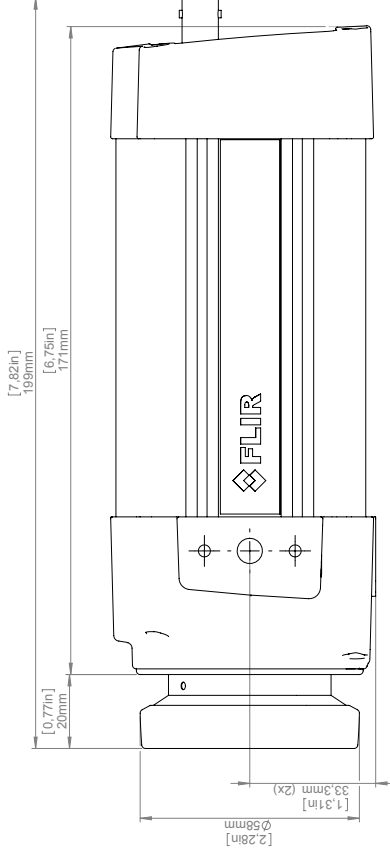
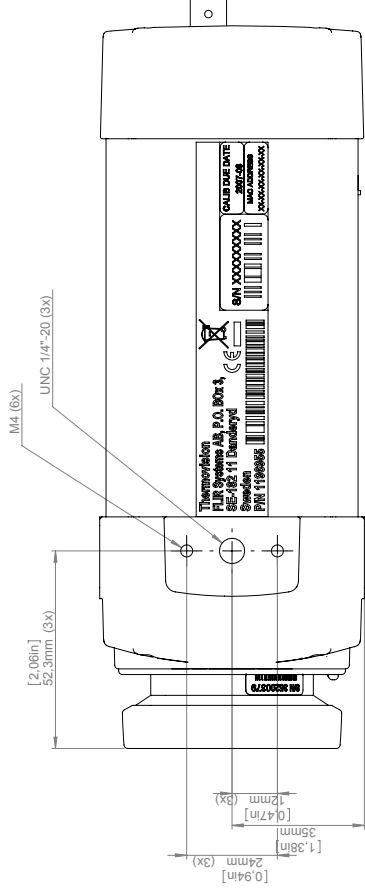
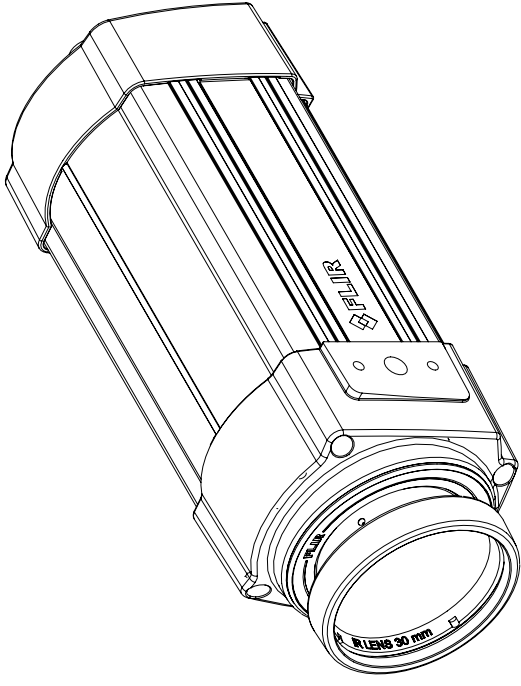
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Denomination Basic dimensions FLIR A3xx/SC3xx			Drawn No. T125002	Scale A	



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# Camera with Lens IR f=30 mm (15°)

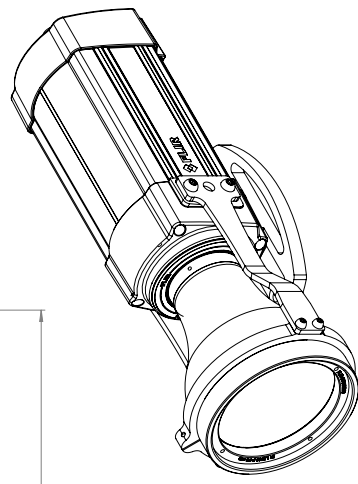
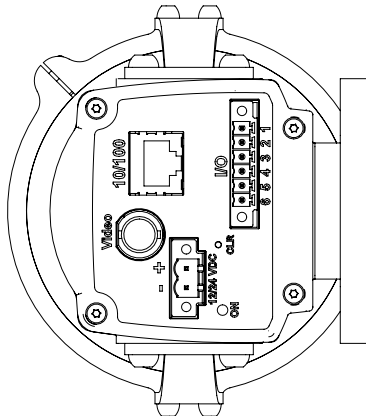
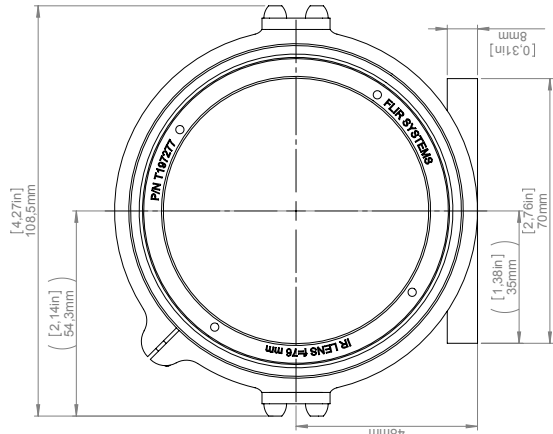
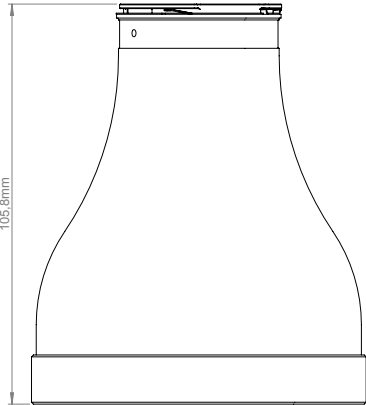
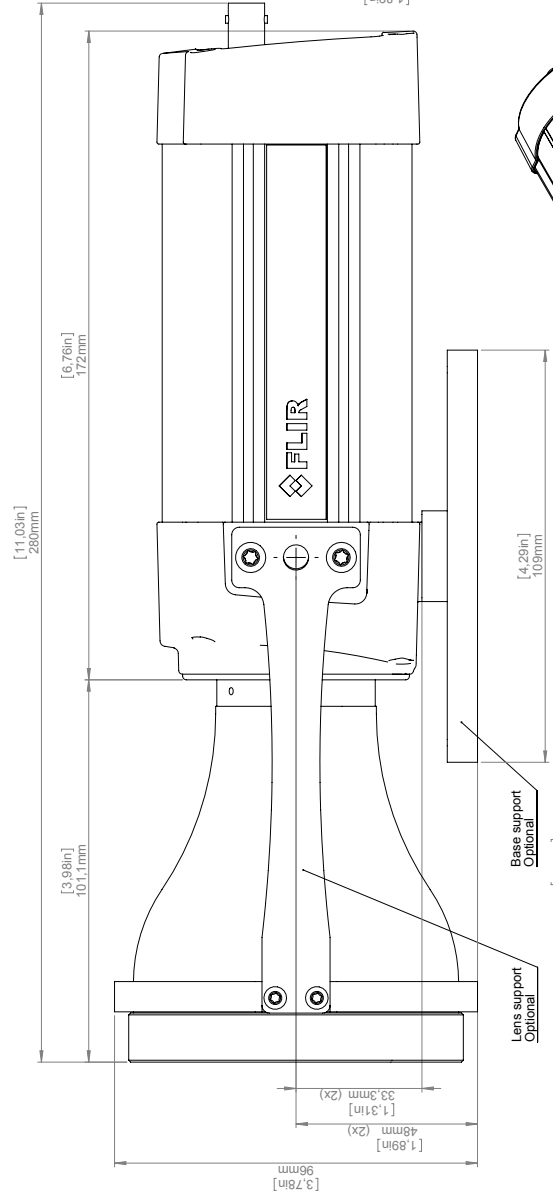
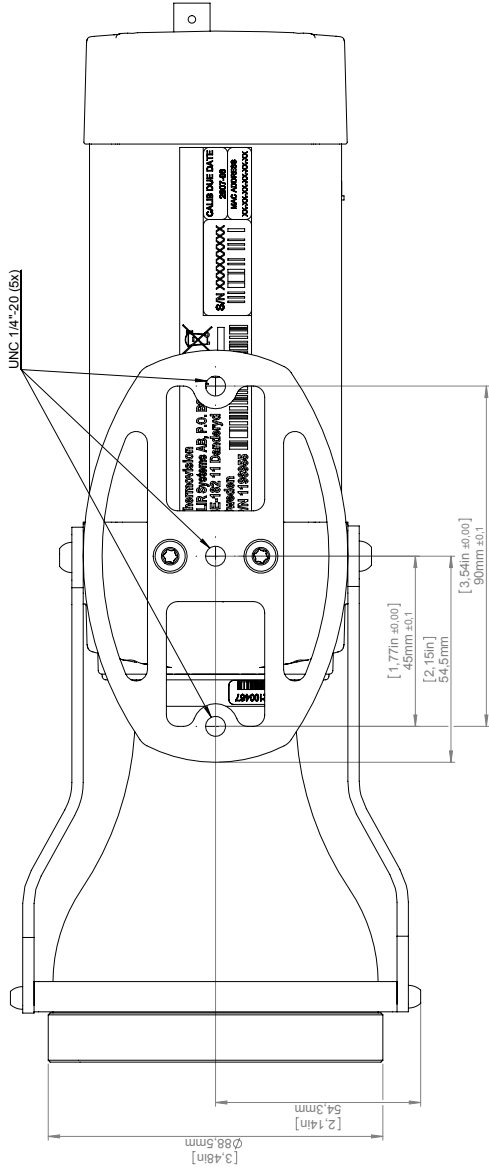


For additional dimensions see page 1

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



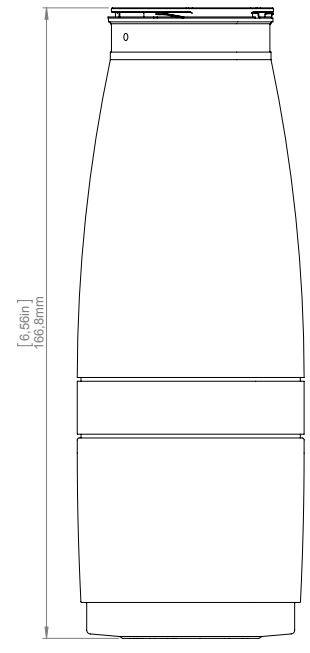
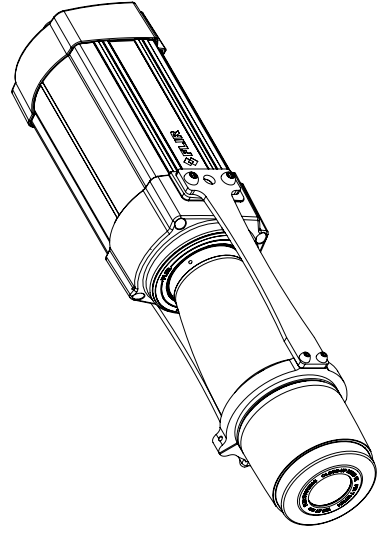
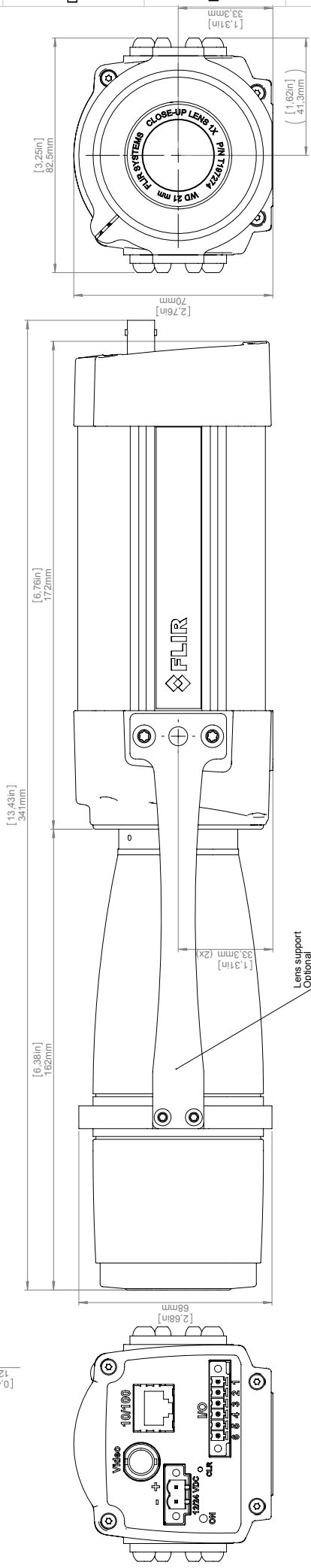
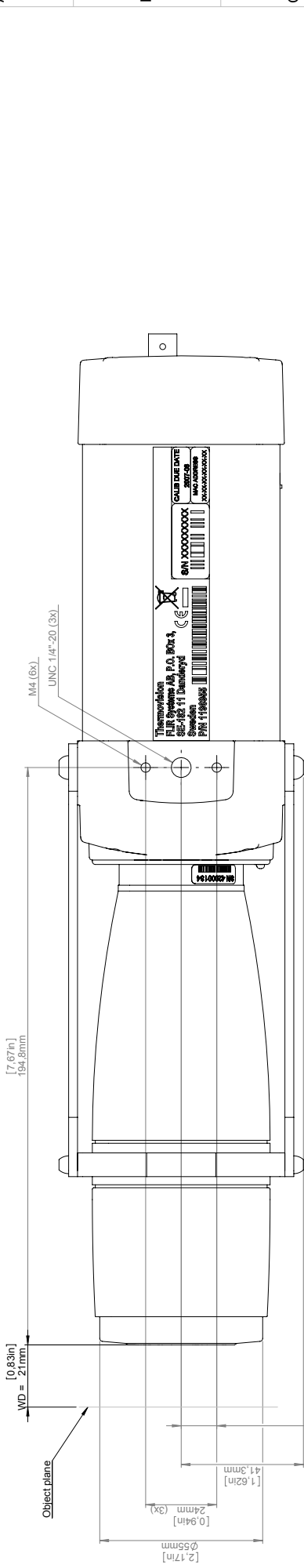
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Denotation												Drawing No.	T125002

Basic dimensions FLIR A3xx/SC3xx

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# Camera with Close-up lens 1X (25 µm) incl support

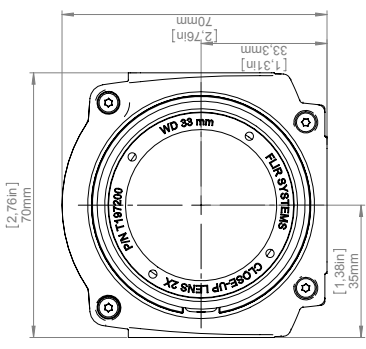
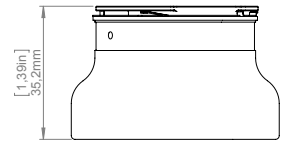
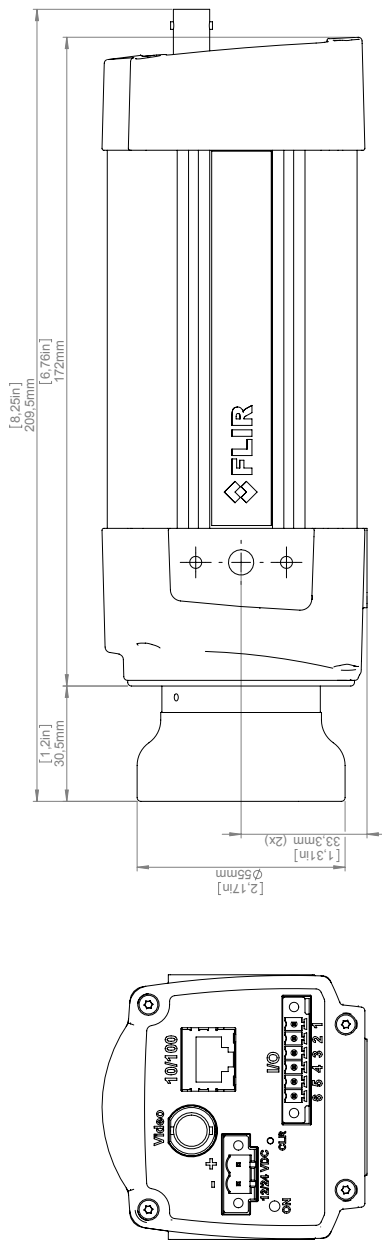
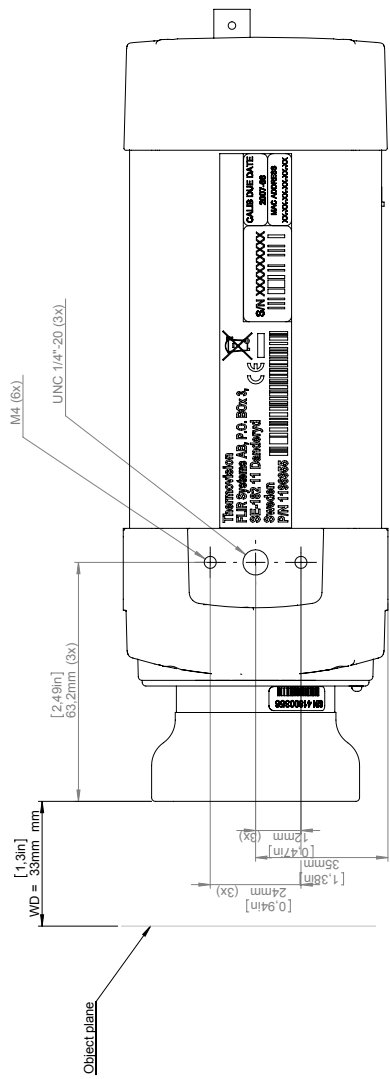
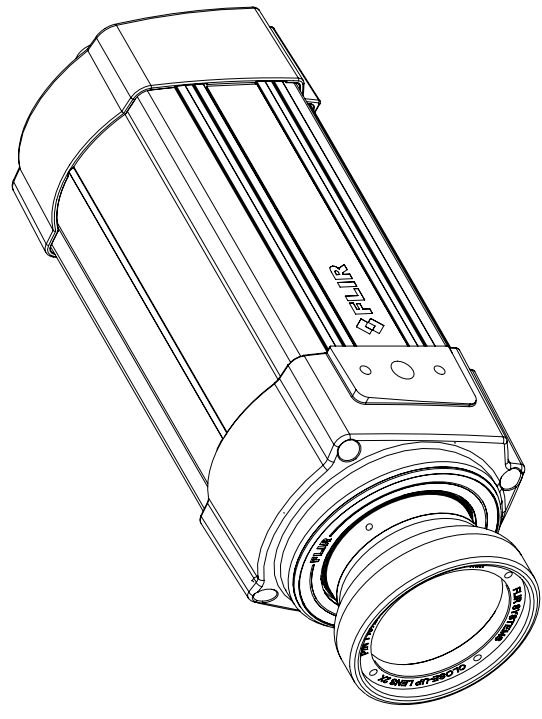


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Denomination Basic dimensions FLIR A3xx/SC3xx			Drawn No. T125002	Size A	

# Camera with Close-up lens 2X (50 μm)



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Denomination Basic dimensions FLIR A3xx/SC3xx			Drawn No. T125002	Size A	



October 28, 2011

AQ115813

## Certificate of Conformity

This is to certify that the System listed below has been designed and manufactured to meet the requirements, as applicable, of the following EU-Directives and corresponding harmonising standards. The systems consequently meet the requirements for the CE-mark.

**Directives:**

**Directive 2004/108/EC;** **Electromagnetic Compatibility**  
**Directive 2006/95/EC;** **“Low voltage Directive” (Power Supply)**  
**Directive 2002/96/EC** **Waste electrical and electronic equipment; WEEE**  
(As applicable)

**Standards:**

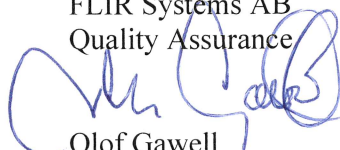
**Emission:** **EN 61000-6-3; Electromagnetic Compatibility**  
**Generic standards - Emission**

**Immunity:** **EN 61000-6-2; Electromagnetic Compatibility;**  
**Generic standards – Immunity**

**Safety (Power Supply):** **EN 60950** (or other)  
**Safety of information technology**  
**equipment**

**System:** **FLIR A3xx Series**

FLIR Systems AB  
Quality Assurance



Olof Gawell  
Director

The Forward Looking Infrared Company