

P/N: 61201-1203

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<http://www.flir.com>

Customer support

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General description	
The main purpose of the housing on the FLIR A315f is to increase the environmental specification of the standard FLIR A315 to IP66 without affecting any of the features available in the camera itself.	
The built-in FLIR A315 camera has features and functions that make it the natural choice for anyone who uses PC software to solve problems and for whom 320 × 240 pixel resolution is sufficient. Among its main features are GigE Vision and GenICam compliance, which makes it plug-and-play when used with software packages such as IMAQ Vision and Halcon.	
Key features:	
<ul style="list-style-type: none"> • Encapsulation to IP66. • Affordable. • GigE compliant. • GenICam compliant. • Trigg/synchronization/GPIO. • 16-bit 320 × 240 pixel images at 60 Hz, signal, temperature linear, and radiometric. • Compliant with any software that supports GenICam, including National Instruments IMAQ Vision and Stemmers Common Vision Blox. 	
Typical applications:	
<ul style="list-style-type: none"> • High-end infrared machine vision that needs temperature measurement. • Slag detection. • Food processing. • Electronics testing. • Power resistor testing. • Automotive. 	
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	60 Hz
Focus	Automatic or manual (built in motor)
Detector data	
Detector type	Focal plane array (FPA), uncooled microbolometer
Spectral range	7.5–13 μm

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Detector data	
Detector pitch	25 μ m
Detector time constant	Typical 12 ms

Measurement	
Object temperature range	<ul style="list-style-type: none"> -20 to +120°C (-4 to +248°F) 0 to +350°C (+32 to +662°F)
Accuracy	$\pm 4^\circ\text{C}$ ($\pm 7.2^\circ\text{F}$) or $\pm 4\%$ of reading

Measurement analysis	
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 object parameters

Ethernet	
Ethernet	Control and image
Ethernet, type	Gigabit Ethernet
Ethernet, standard	IEEE 802.3
Ethernet, connector type	RJ-45
Ethernet, communication	TCP/IP socket-based FLIR proprietary and GenICam protocol
Ethernet, image streaming	16-bit 320 \times 240 pixels @ 60 Hz - Signal linear - Temperature linear - Radiometric GigE Vision and GenICam compatible
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), Image flow control, (stream on/off), Input ext. device (programmatically read)
Digital input	2 opto-isolated, 10–30 VDC
Digital output, purpose	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



FLIR A315f 25°

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Power system	
External power operation	The camera operates on 12/24 VDC, 9 W max. (allowed range: 10-30 VDC) and heaters on 24 VDC, 25 W max. In total: 34 W.
External power, connector type	2-pole jackable screw terminal
Voltage	Allowed range 10–30 VDC
Environmental data	
Operating temperature range	–25°C to +50°C (–13°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">• EN 61000-6-2 (Immunity)• EN 61000-6-3 (Emission)• FCC 47 CFR Part 15 Class B (Emission)
Encapsulation	IP 66 (IEC 60529)
Bump	5 g, 11 ms (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Physical data	
Weight	5 kg (11.0 lb.)
Size (L × W × H)	460 × 140 × 159 mm (18.1 × 5.5 × 6.3 in.)
Base mounting	
Housing material	Aluminum
System features	
External power operation (heater)	24 VDC, 25 W max.
External power, connector type (heater)	2-pole jackable screw terminal
Voltage (heater)	Allowed range 21-30 VDC
Automatic heaters	Clears window from ice
Shipping information	
Packaging, type	Cardboard box
List of contents	<ul style="list-style-type: none">• Infrared camera with lens and environmental housing• FLIR Sensors Manager download card• FLIR Tools & Utilities CD-ROM• Lens cap• Printed documentation• Small accessories kit
Packaging, weight	
Packaging, size	534 × 207 × 230 mm (21.0 × 8.1 × 9.1 in.)
EAN-13	7332558006153
UPC-12	845188006464
Country of origin	Sweden

Supplies & accessories:

- T129252; Special temperature range -20 to +700 deg C
- T129253; Special temperature range -20 to +500 deg C
- T129254; High temperature measurement option -20 to +2000 deg C
- T130151; Special temperature range -20 to +2000 deg C
- T130152; Special temperature range +200 to +1200 deg C



FLIR A315f 25°

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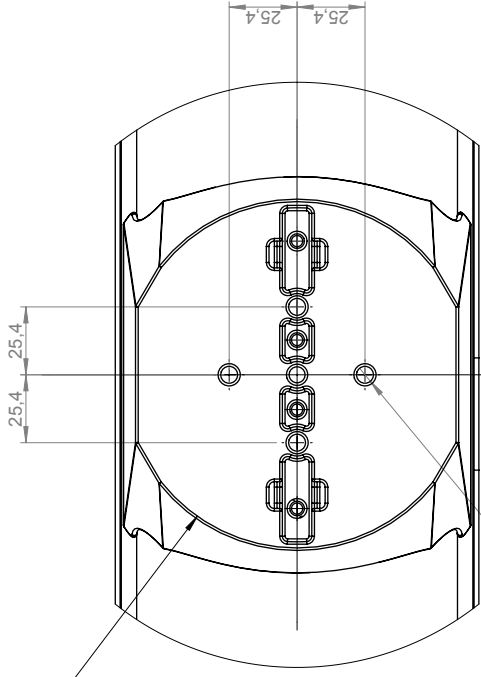
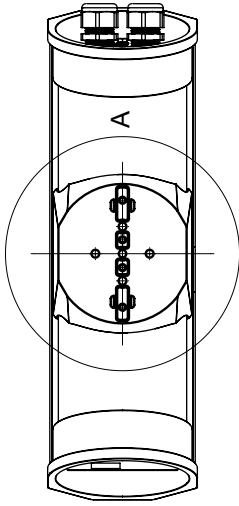
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- T911803; Power supply, 24 VDC, 2 A, 50 W
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- 1910586ACC; Power cable, pigtailed
- T129785ACC; Dust control ring
- 324-0004-00; HARD CASE - WITH FOAM, F - SERIES
- 500-0463-00; PEDESTAL MOUNT ASSY - F-SERIES
- 4119507; POLE ADAPTER - F-SERIES
- 500-0462-00; WALL MOUNT ASSY - F-SERIES
- T198584; FLIR Tools
- T198583; FLIR Tools+ (download card incl. license key)
- APP-10002; FLIR Tools Mobile (Android Application)
- T199233; FLIR Atlas SDK for .NET
- T199234; FLIR Atlas SDK for MATLAB
- T198567; ThermoVision™ System Developers Kit Ver. 2.6
- T198566; ThermoVision™ LabVIEW® Digital Toolkit Ver. 3.3
- INST-EW-0155; Extended Warranty 1 Year for A300f, A310f, A315f, T540, T600/bx, T610
- INST-EWGM-0165; Extended Premier Warranty 1 Year for A300f, A310ex, A310f, A310f, A315f, A6xx, B/T400 mkl, T10xx
- INST-GM-0155; Calibration incl General Maintenance for A300f, A310ex, A310f, A310pt, A315f, A6xx, P6xx, T10xx

1 2 3 4 5 6 7 8 9 10

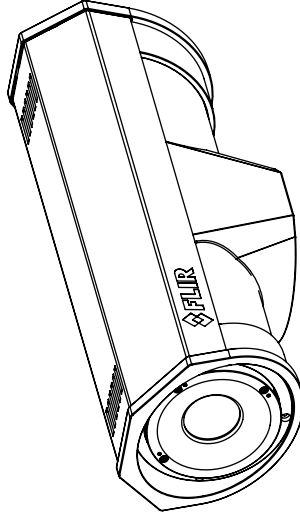
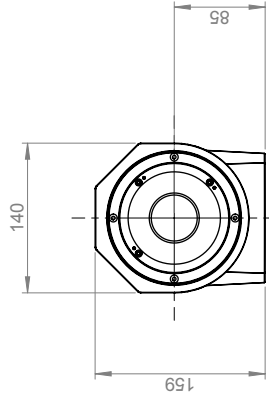
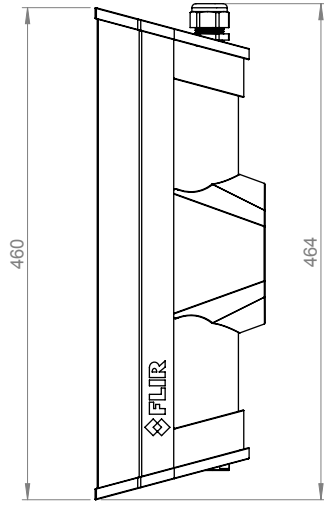
A B C D E F G

NOMINAL BASE SURFACE DIAMETER, $\phi 127$



DETAIL A
SCALE 1:2

5x 1/4 - 20 ∇ 19 mm



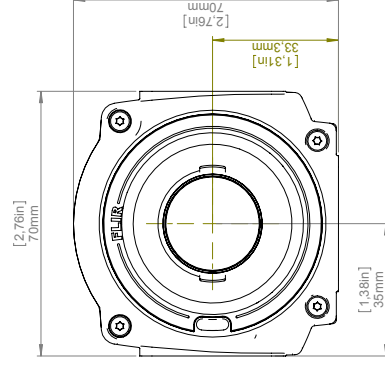
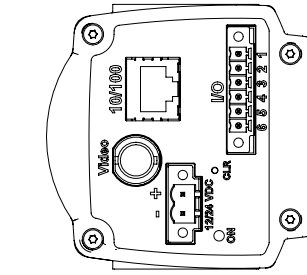
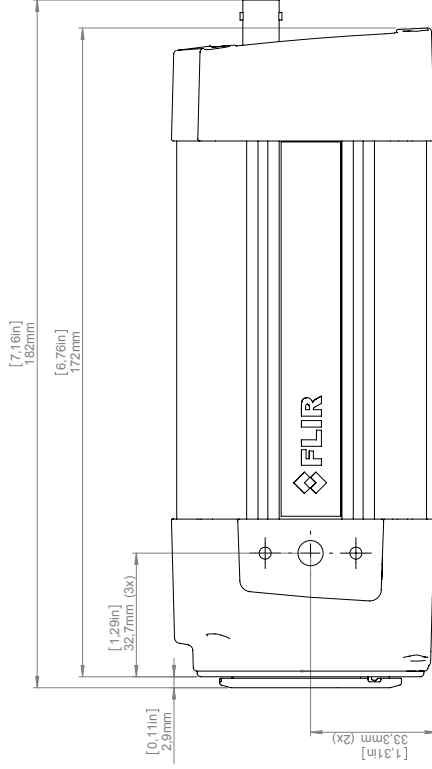
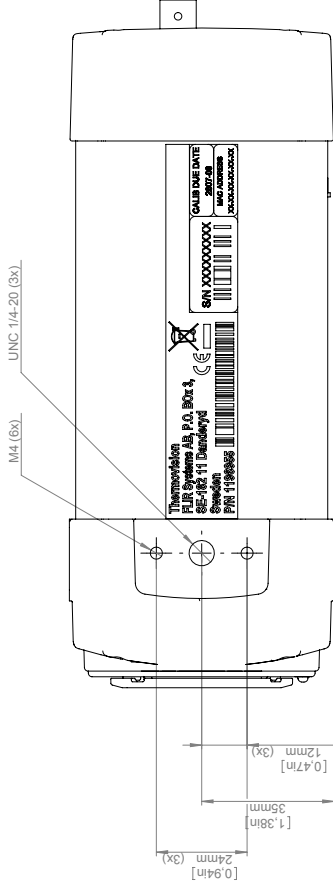
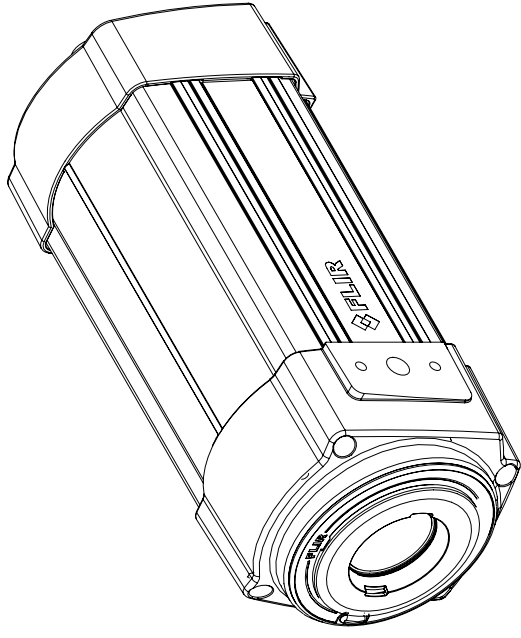
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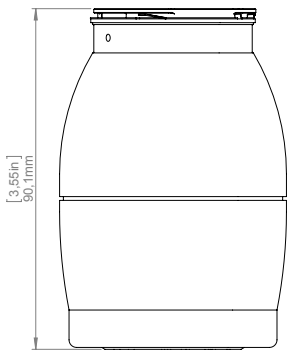
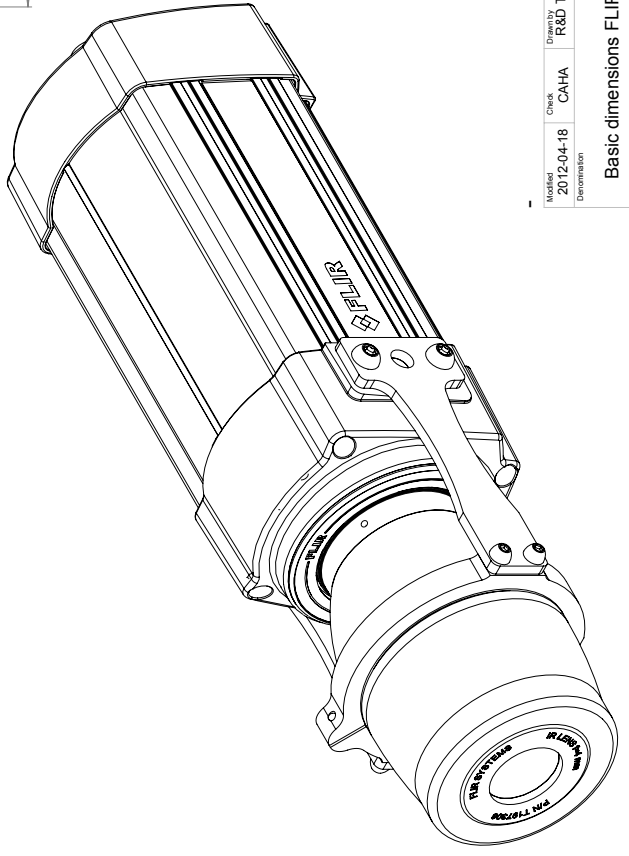
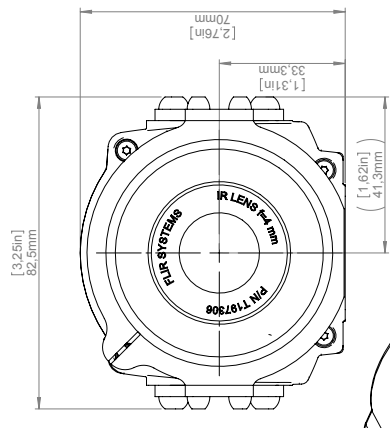
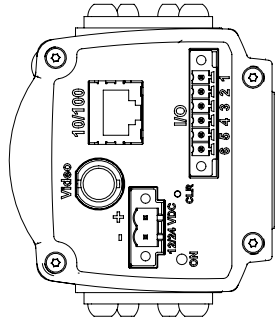
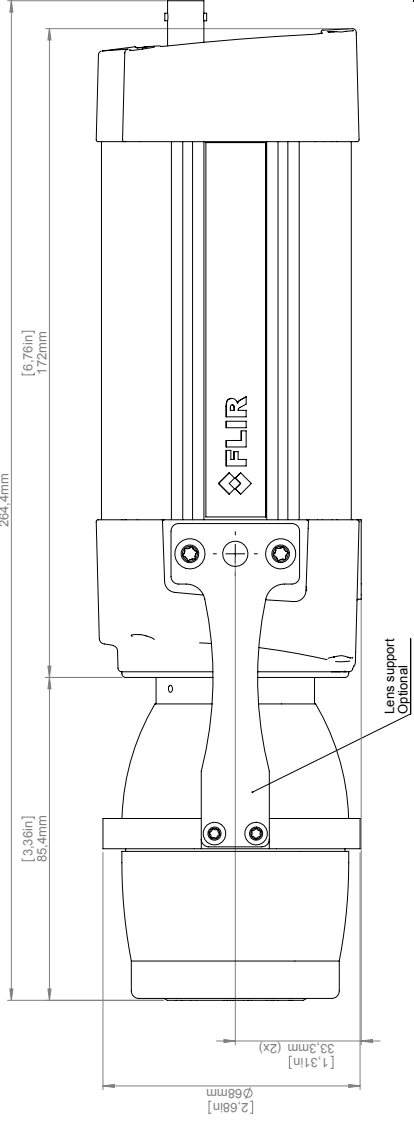
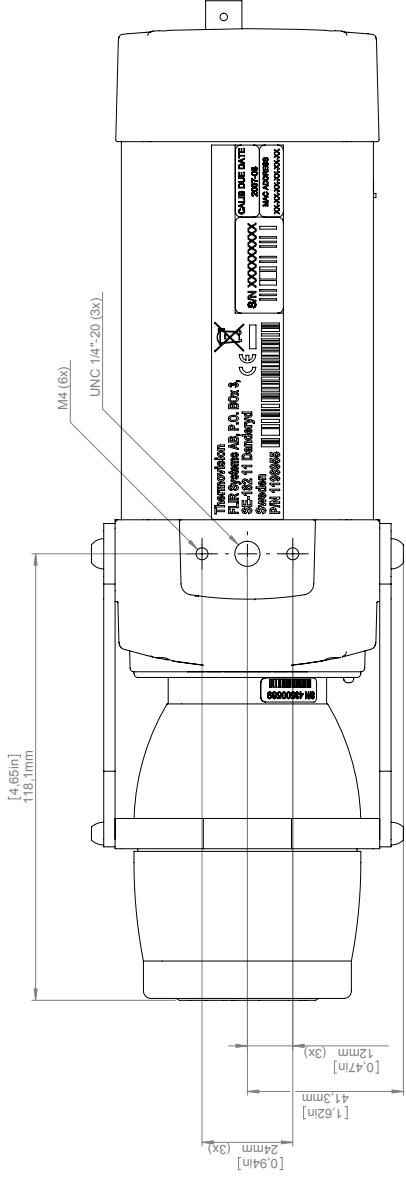
Konstr/Drawn H. ÖSTLING	Datum/Date 2011-11-25	Kontr/Check HAOS	Material -
Ändrad av/Modified by H. ÖSTLING	Ändrad/Modified 2011-11-28	Ytjämnhet/Roughness Ra - μm	Ytbehandling/Surface treatment -
Där ej annat anges/Unless otherwise stated Gen tol ISO 2768-mK Utdrag utifrån ISO 2768-m 0.5-6 ± 0.1 Hålkårsradier (6)-30 ± 0.2 Fillet radii (120)-400 ± 0.5 Kanter brutna (-400)-1000 ± 0.8 Edges broken			
DIMENSIONAL DRAWING F-SERIES			
Skala/Scale 1:5	Blad/Sheet 1(1)	Storlek/Size A3	Rev A
Ritn nr/Drawing No T127376			



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



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

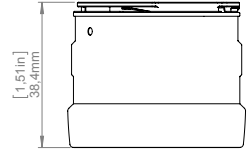
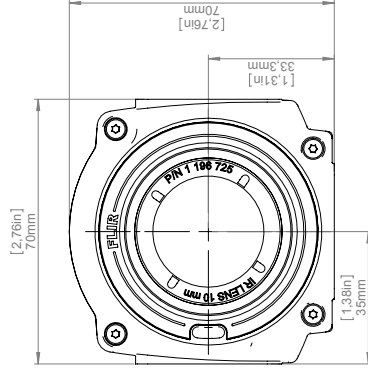
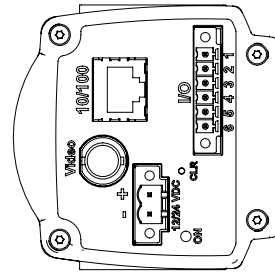
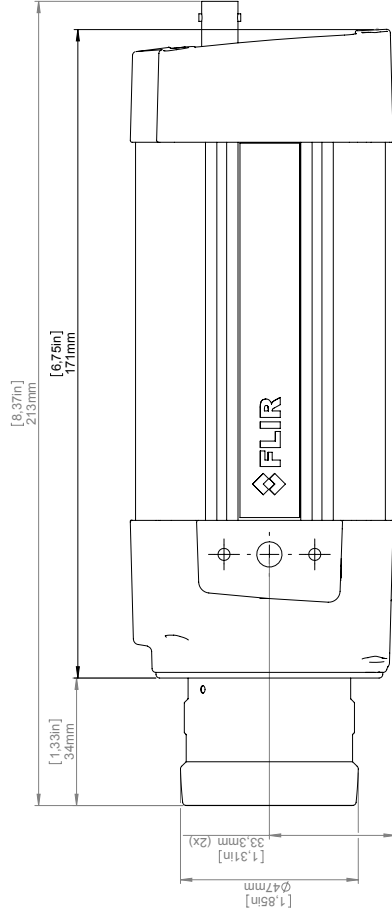
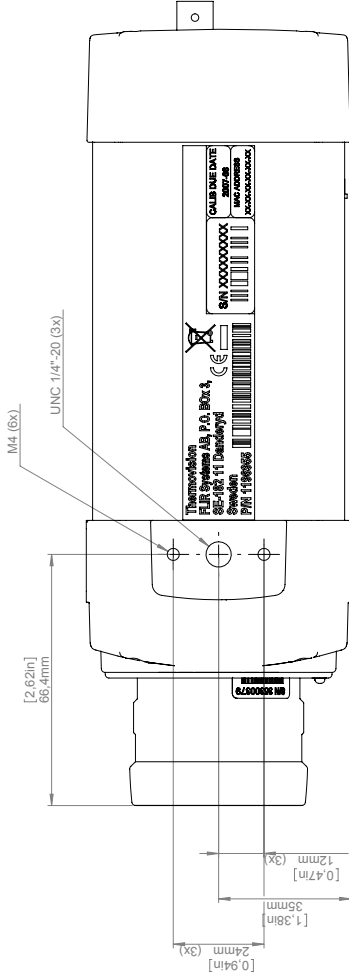
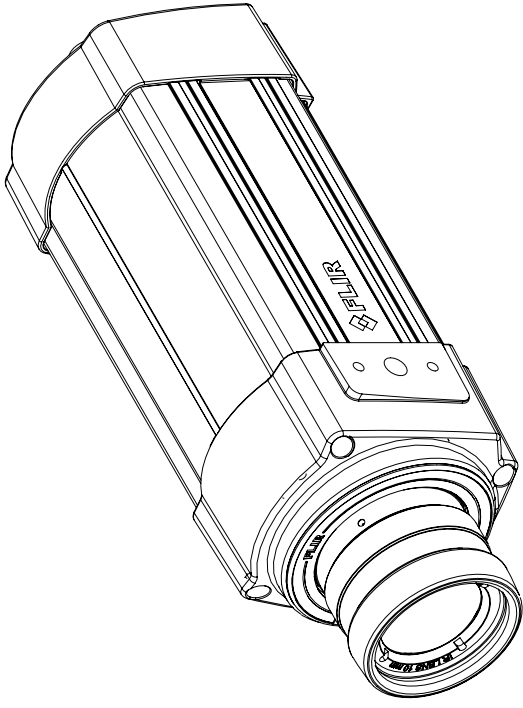


For additional dimensions see page 1

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Denomination												Drawing No.	T125002
Basic dimensions FLIR A3xx/SC3xx													

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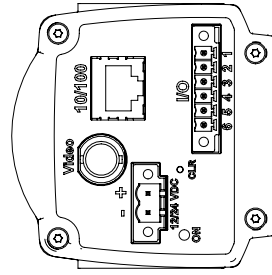
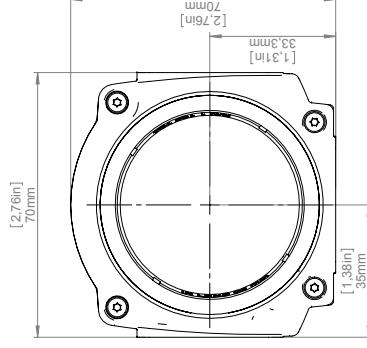
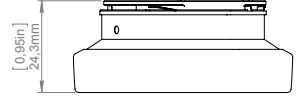
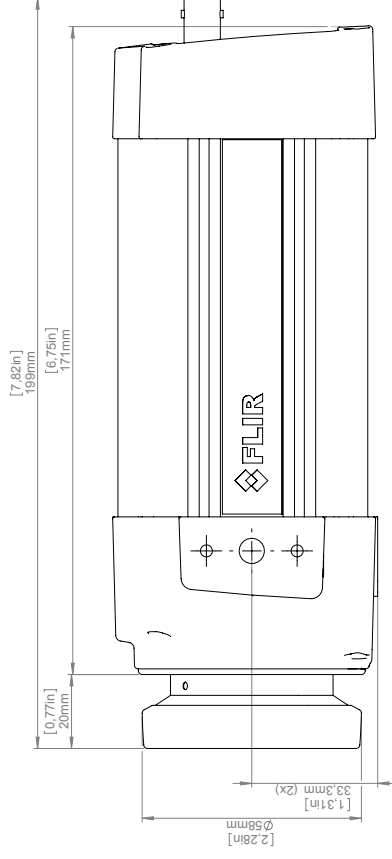
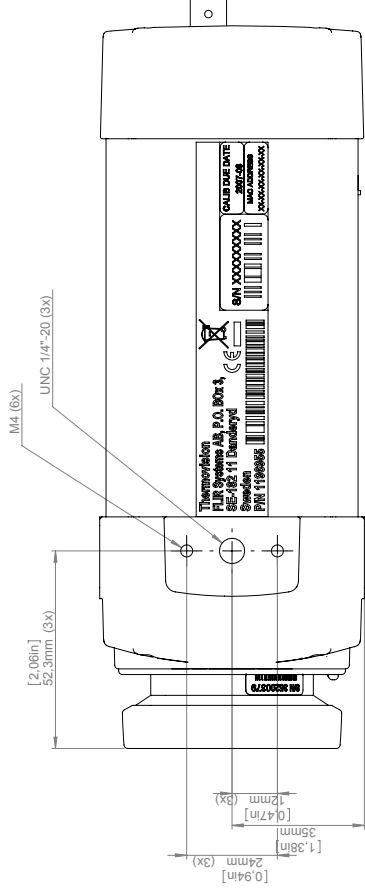
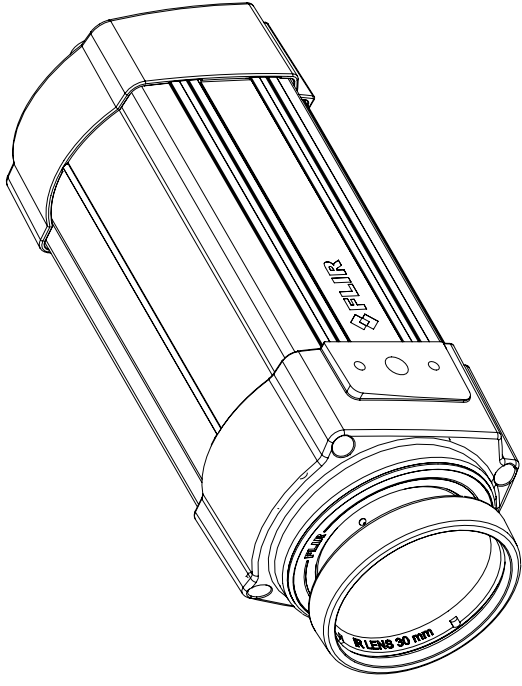
Camera with Lens IR f=10 mm (45°)



For additional dimensions see page 1

Modified 2012-04-18	Check CAHA	Drawn by R&D Thermography	Size A3	Scale 1:1	Sheet 3(8)
Denomination Basic dimensions FLIR A3xx/SC3xx			Drawn No. T125002	Scale A	

Camera with Lens IR f=30 mm (15°)

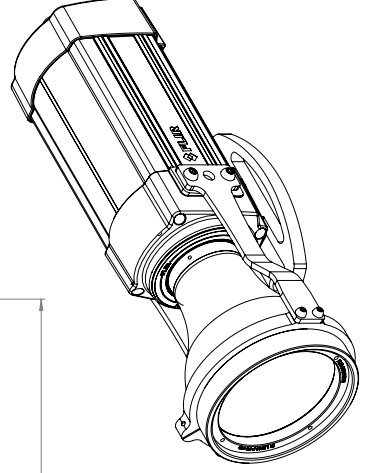
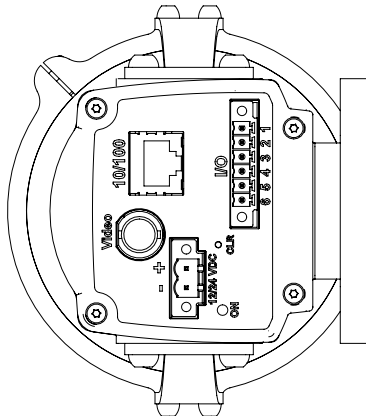
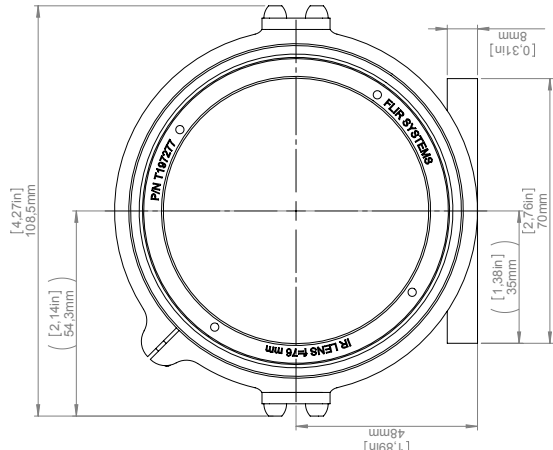
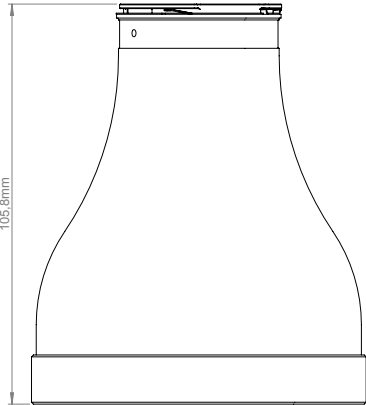
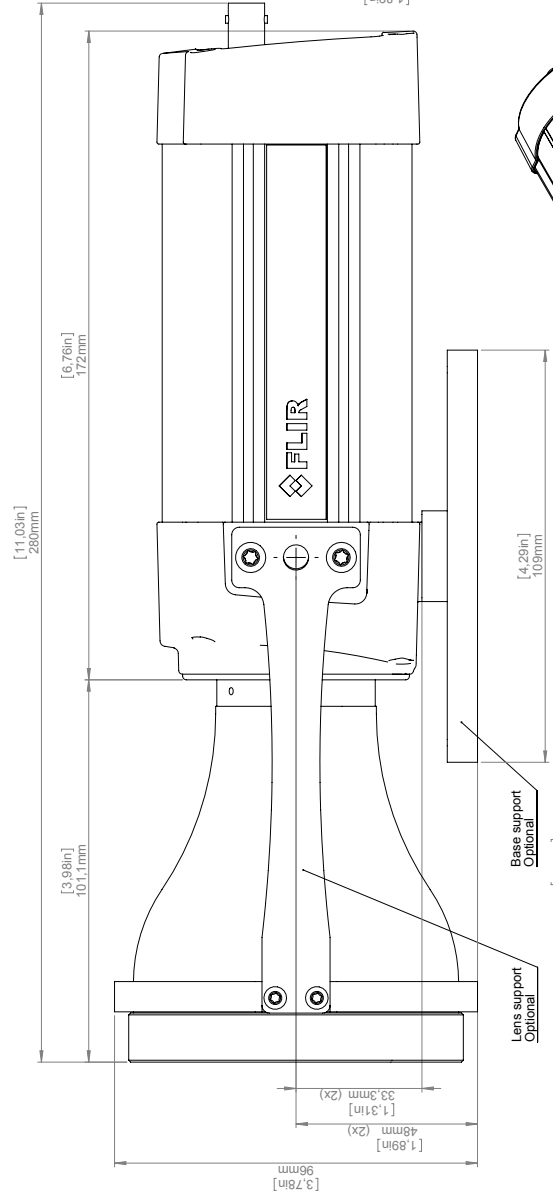
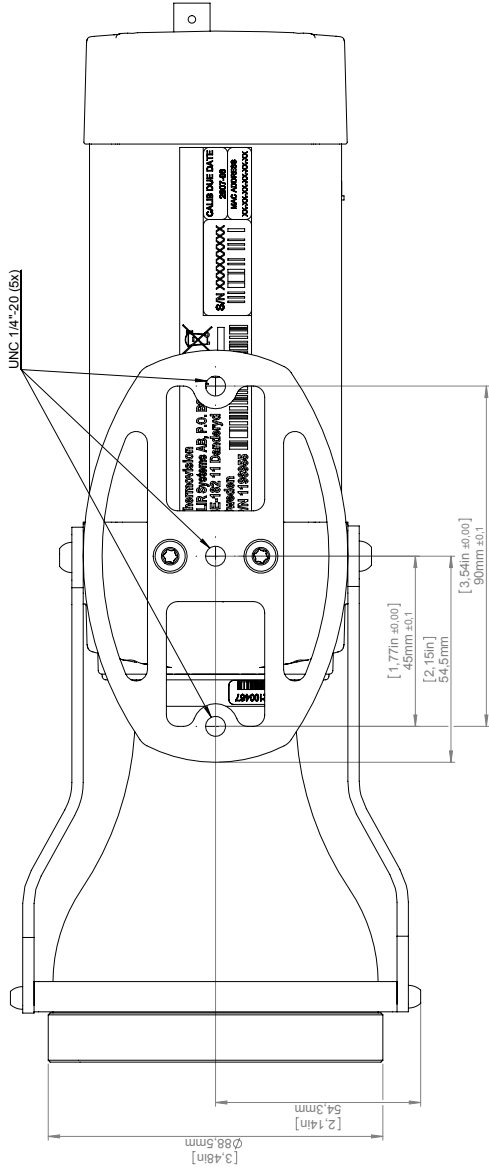


For additional dimensions see page 1

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



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



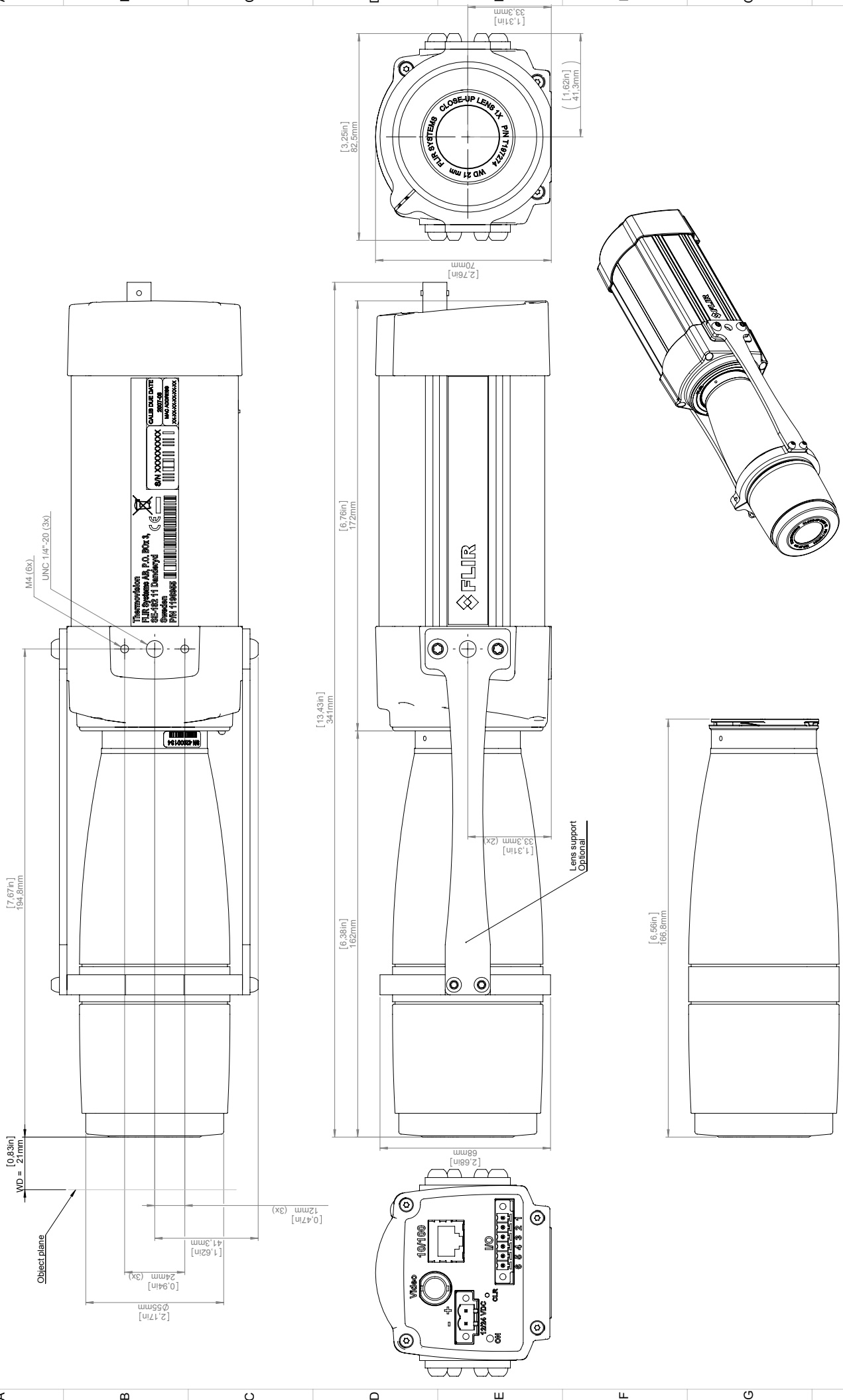
For additional dimensions see page 1

Modified	2012-04-18	Check	CAHA	Drawn by	R&D Thermography	Size	A3	Scale	1:1	Sheet	5(8)	Size	A
Denotation												Drawing No.	T125002

Basic dimensions FLIR A3xx/SC3xx

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



For additional dimensions see page 1

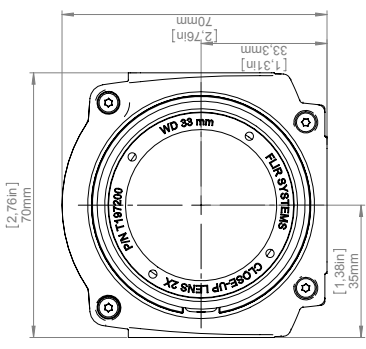
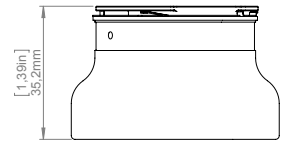
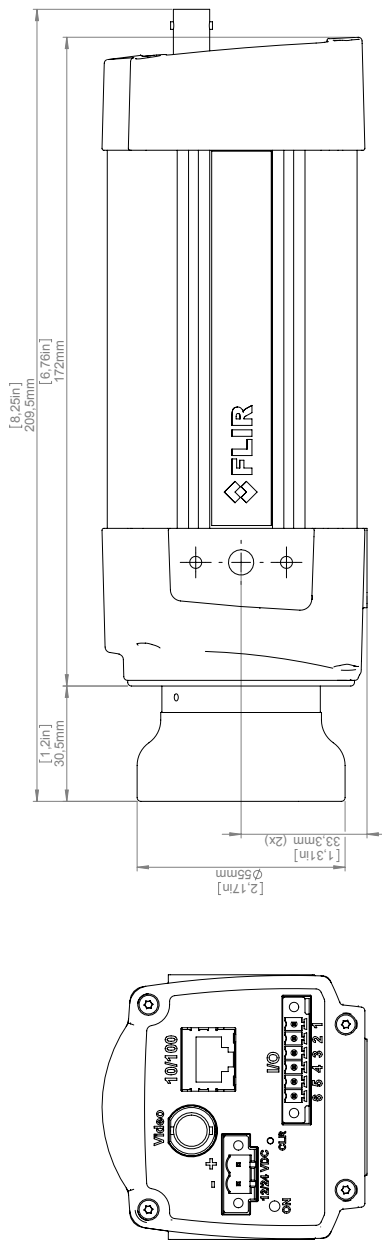
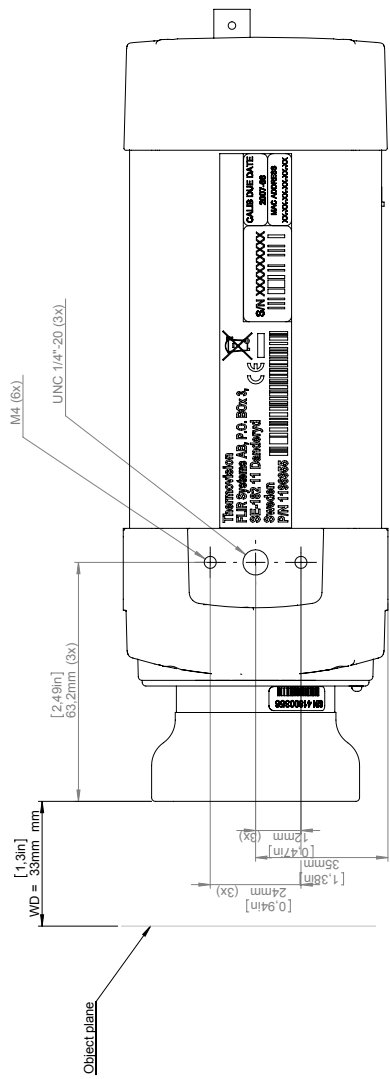
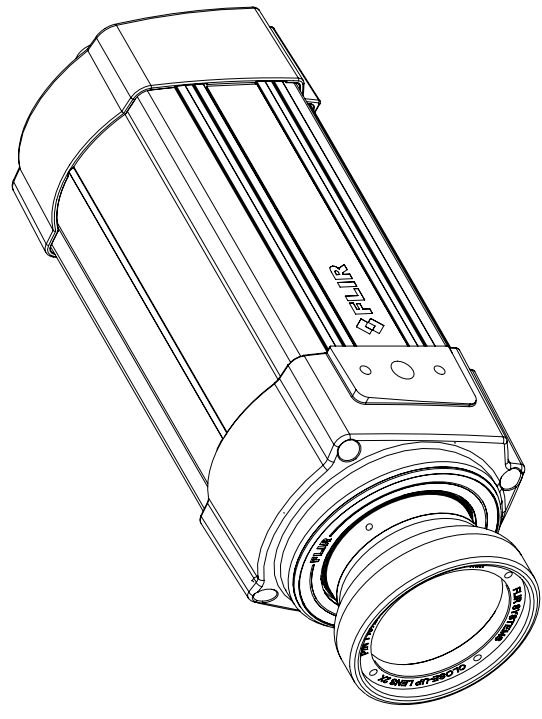
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Denomination					
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Basic dimensions FLIR A3xx/SC3xx

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Camera with Close-up lens 2X (50 μm)

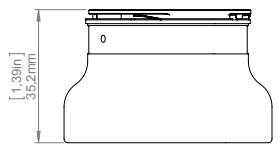
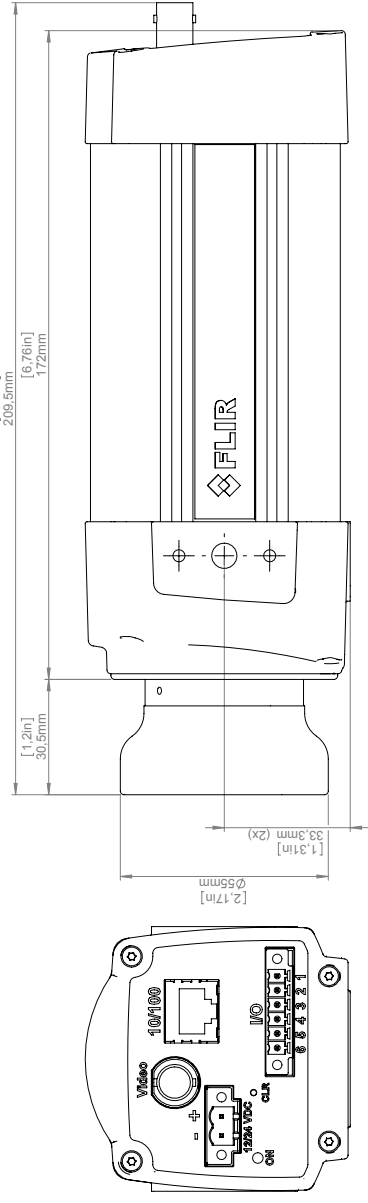
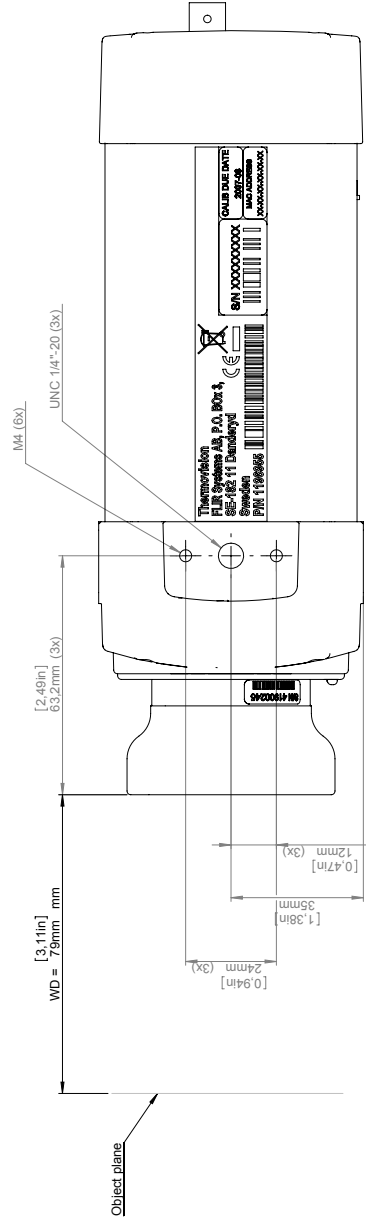
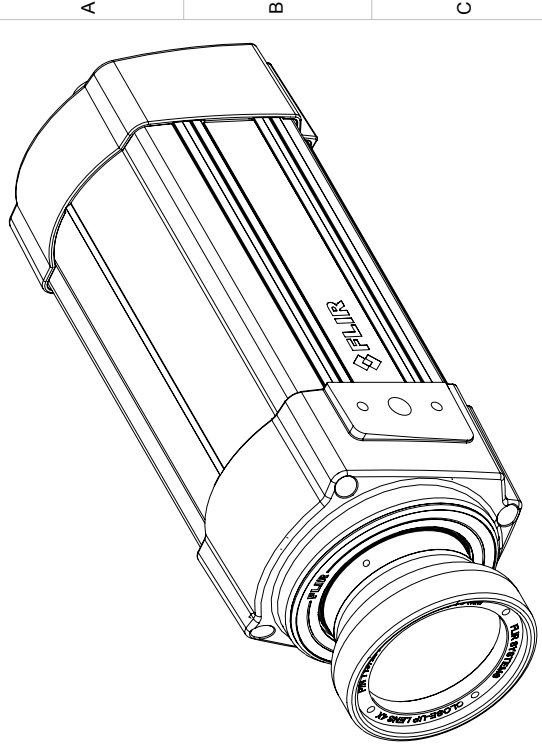


For additional dimensions see page 1

Modified	2012-04-18	Check	CAHA	Drawn by	R&D Thermography	Size	A3	Scale	1:1	Sheet	7(8)	Drawn No.	T125002	Size	A
Denomination: Basic dimensions FLIR A3xx/SC3xx															

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Camera with Close-up lens 4X (100 μm)



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Denotation					
Size	A3	Scale	1:1	Sheet	8(8)
Drawn No.	T125002				

Basic dimensions FLIR A3xx/SC3xx

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September 2, 2013 AQ320038

CE Declaration of Conformity

This is to certify that the System listed below have 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

Standards:

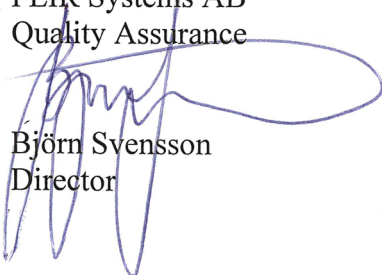
**Emission: EN 61000-6-4; Electro magnetic Compatibility
 Generic standards - Emission**

**Immunity: EN 61000-6-2; Electro magnetic Compatibility;
 Generic standards - Immunity**

System: **FLIR A310f series**

FLIR Systems AB
Quality Assurance

Björn Svensson
Director

A blue ink signature in cursive script, overlapping the printed name 'Björn Svensson' and extending to the right.