FLIR A320 Tempscreen

P/N: 48201-1201

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http://www.flir.com

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http://support.flir.com

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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	• –20 to +120°C (–4 to +248°F) • 0 to +350°C (+32 to +662°F)
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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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 • Signal linear • Temperature linear • Radiometric
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 http://support.flir.com/service for contact details.
Ethernet, protocols	TCP, UDP, SNTP, 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, 0–1.5 V = low, 3–25 V = high
Digital output, purpose	As function of ALARM, Output to ext. device (programmatically set)
Digital output	2 opto-isolated, ON = supply (max. 100 mA), OFF = open
Digital I/O, isolation voltage	500 VRMS
Digital I/O, supply voltage	6–24 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

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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

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	• EN 61000-6-2:2001 (Immunity) • EN 61000-6-3:2001 (Emission) • FCC 47 CFR Part 15 Class B (Emission)
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 × W × H)	170 × 70 × 70 mm (6.7 × 2.8 × 2.8 in.)
Tripod mounting	UNC ¼"-20 (on three sides)
Base mounting	2 × M4 thread mounting holes (on three sides)
Housing material	Aluminum

Shipping information	
Packaging, type	Cardboard box
List of contents	• Infrared camera with lens • Ethernet cable • Mains cable • Power cable, pig-tailed • Power supply • Printed documentation • Utility CD-ROM
Packaging, weight	
Packaging, size	495 × 370 × 192 mm (19.5 × 14.6 × 7.6 in.)
EAN-13	7332558003398
UPC-12	845188003142
Country of origin	Sweden

Supplies & accessories:

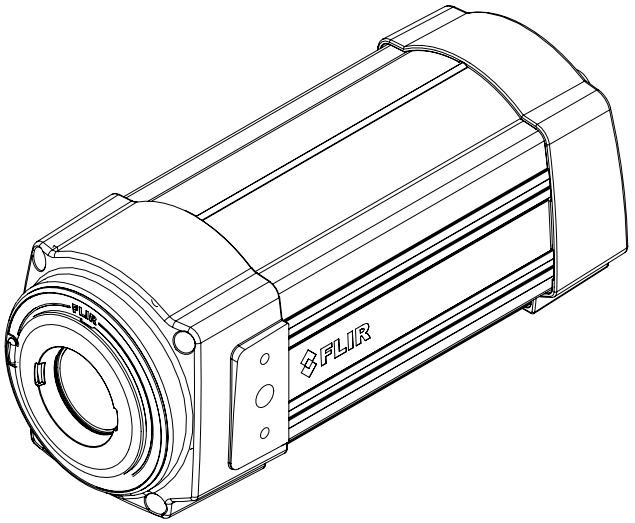
- 1196961; IR lens, f=30 mm, 15° incl. case
- 1196960; IR lens, f=10 mm, 45° incl. case
- T197407; IR lens, 76 mm (6°) with case and mounting support for A3xx, A3xxsc
- T197411; IR lens, 4 mm (90°) with case and mounting support for A3xx, A3xxsc
- T197415; Close-up 1× (25 µm) incl. case and mounting support for A3xx, A3xxsc
- 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
- 1910400; Power cord EU
- 1910402; Power cord UK

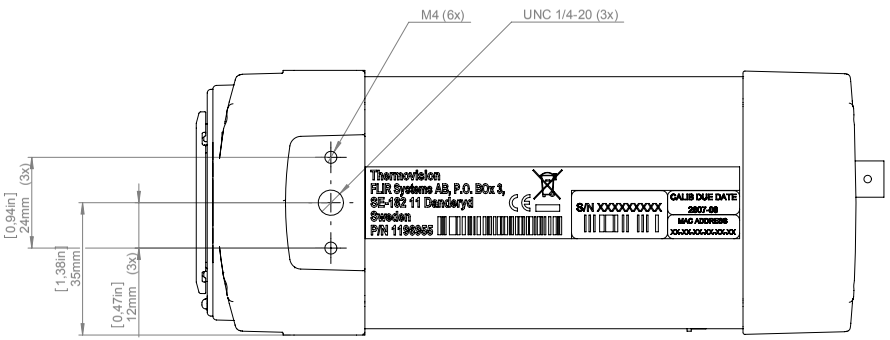
FLIR A320 Tempscreen

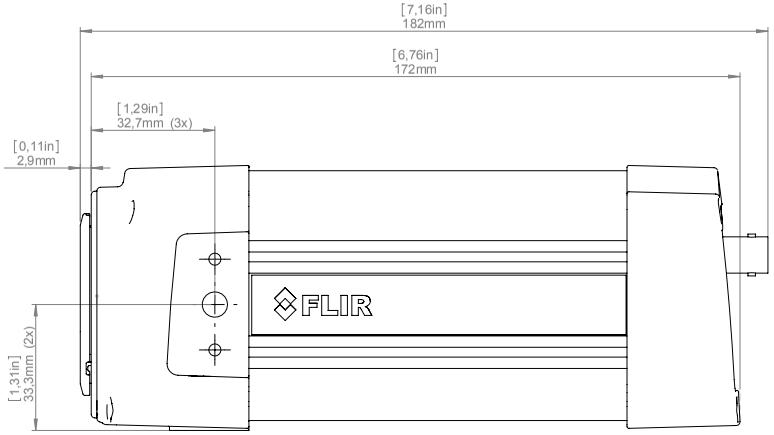
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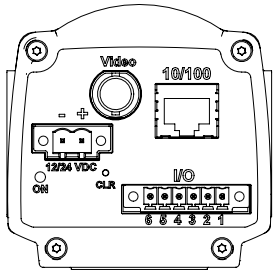
- 1910401; Power cord US
- T911803; Power supply, 24 VDC, 2 A, 50 W
- T910922; Power supply, incl. multi plugs, for A3xx, A3xxsc, A6xx and A6xxsc
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T911307ACC; Ethernet cable, CAT6, 2 m/6.6 ft, 1 screw connector
- 1910586ACC; Power cable, pigtailed
- 908929; Video cable, 3.0 m/9.8 ft.
- T197870ACC; Cardboard box for FLIR A3xx/A6xx series
- T197871ACC; Hard transport case for FLIR A3xx/A6xx series
- T197214; Close-up 2× (50 µm) incl. case
- T197215; Close-up 4× (100 µm) incl. case
- T300243; FLIR Thermal Studio Pro, 1 Year Subscription
- T300083; FLIR Thermal Studio Pro, Perpetual license
- T300258; FLIR Thermal Studio, Perpetual license
- T198584; FLIR Tools
- T198583; FLIR Tools+ (download card incl. license key)
- APP-10002; FLIR Tools Mobile (Android Application)
- T198697; FLIR ResearchIR Max + HSDR 4 (hardware sec. dev.)
- T199014; FLIR ResearchIR Max + HSDR 4 (printed license key)
- T199044; FLIR ResearchIR Max + HSDR 4 Upgrade (printed 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)
- T198731; FLIR ResearchIR Standard 4 (hardware sec. dev.)
- T199012; FLIR ResearchIR Standard 4 (printed license key)
- T199042; FLIR ResearchIR Standard 4 Upgrade (printed license key)
- 4220499; FLIR Research Studio - 1 Year Subscription (online activation)
- 4220500; FLIR Research Studio - Perpetual License (online activation)
- 4220646; FLIR Research Studio - Perpetual License (USB dongle)
- T198567; ThermoVision™ System Developers Kit Ver. 2.6
- T198566; ThermoVision™ LabVIEW® Digital Toolkit Ver. 3.3
- INST-EW-0150; Extended Warranty 1 Year for A3xx, T4xx mkII
- INST-EWGM-0155; Premium Service Package for A3xx, T4xx mkII, T530
- INST-GM-0145; General Maintenance Package for A3xx, T3/4xx

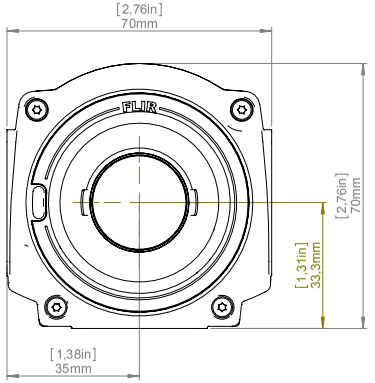
Camera with built-in IR lens f=18 mm (25°)











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Modified	Check	Drawn by
2012-04-18	CAHA	R&D Thermography

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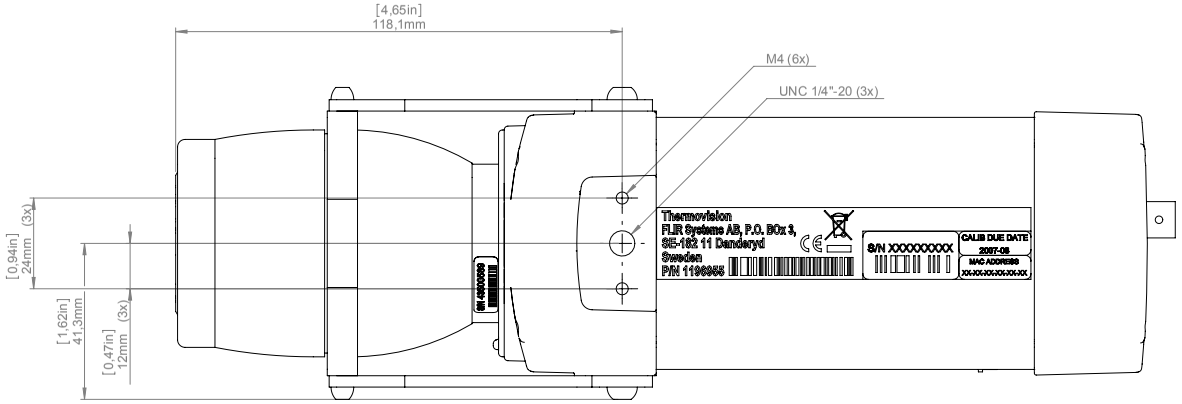
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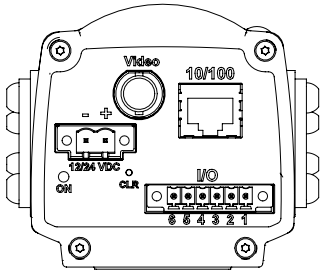
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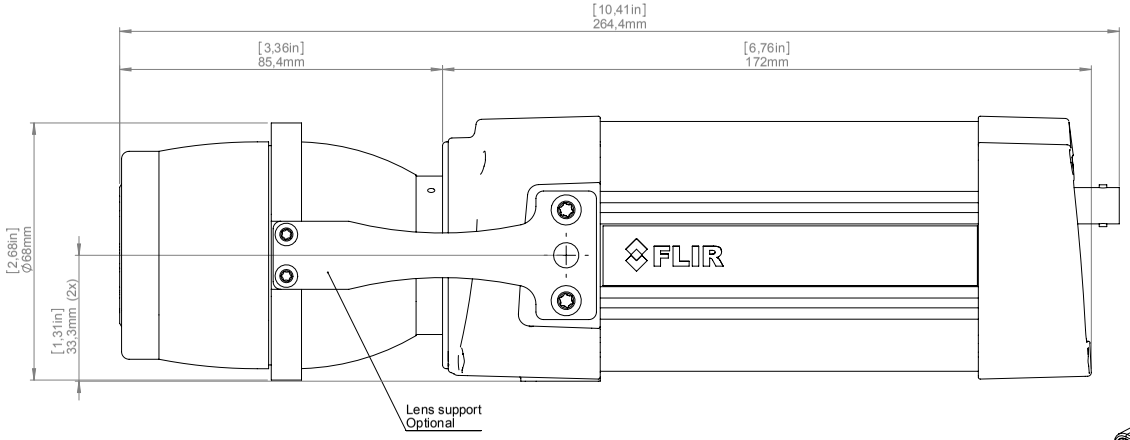
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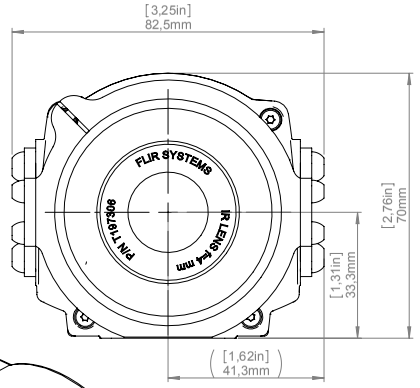
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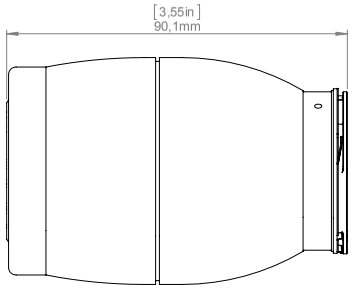
Camera with Lens IR f=4 mm (90°) incl support

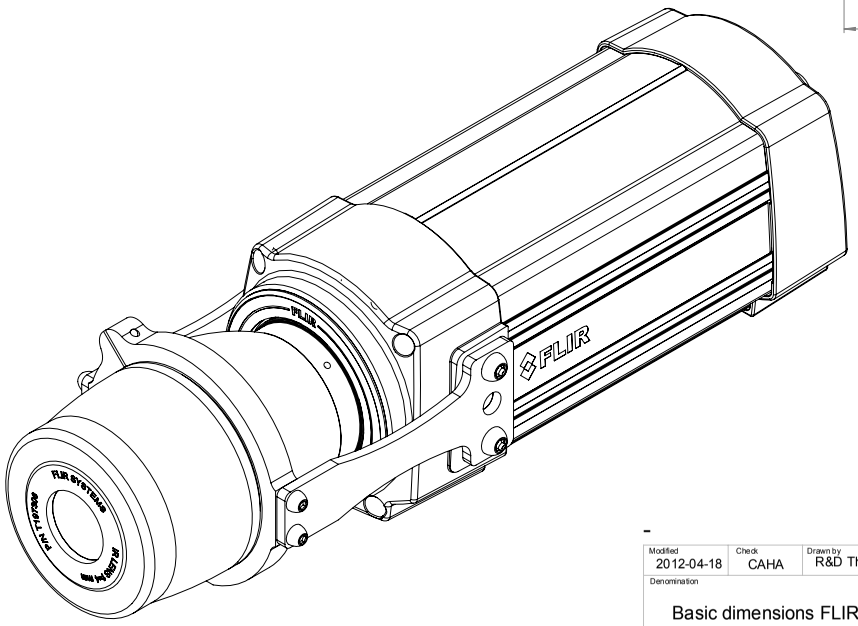












For additional dimensions see page 1

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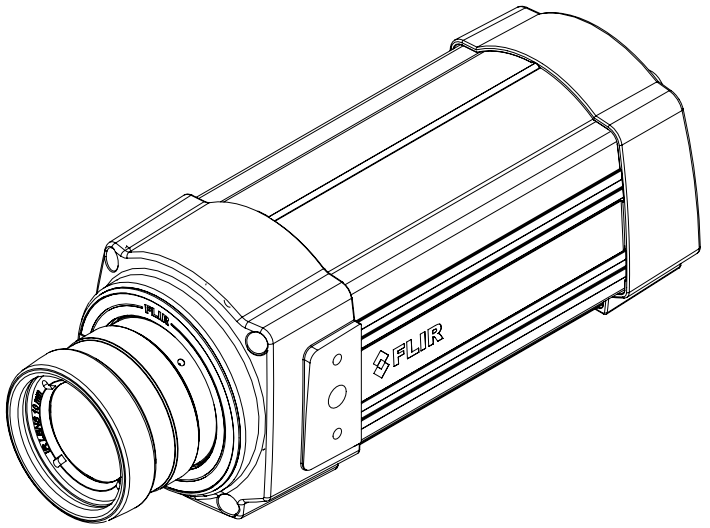
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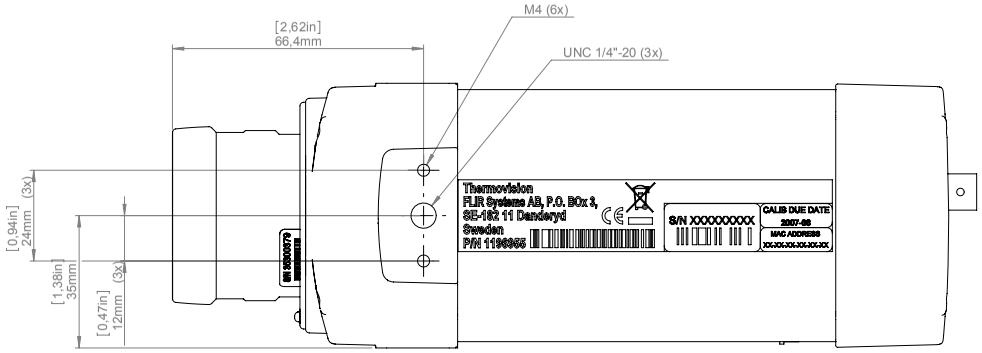
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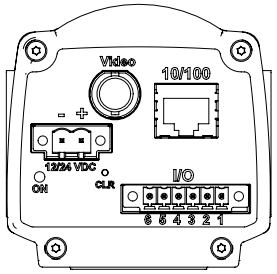
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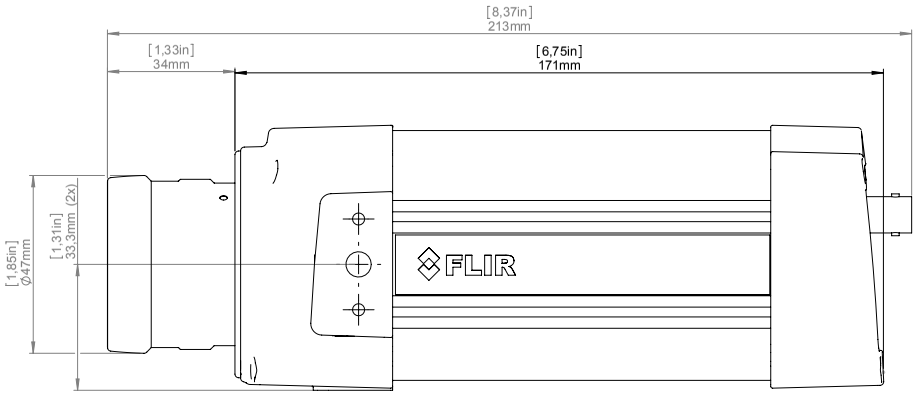
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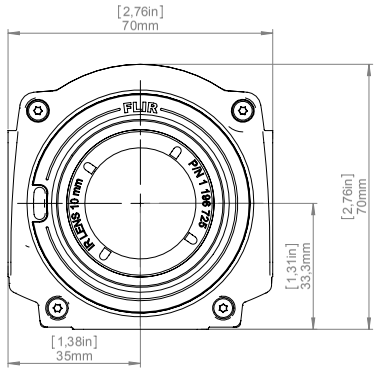
Camera with Lens IR f=10 mm (45°)

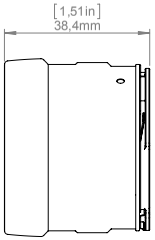












For additional dimensions see page 1

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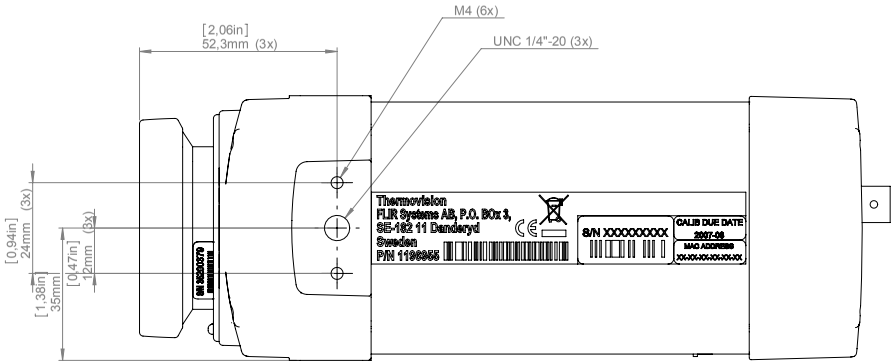
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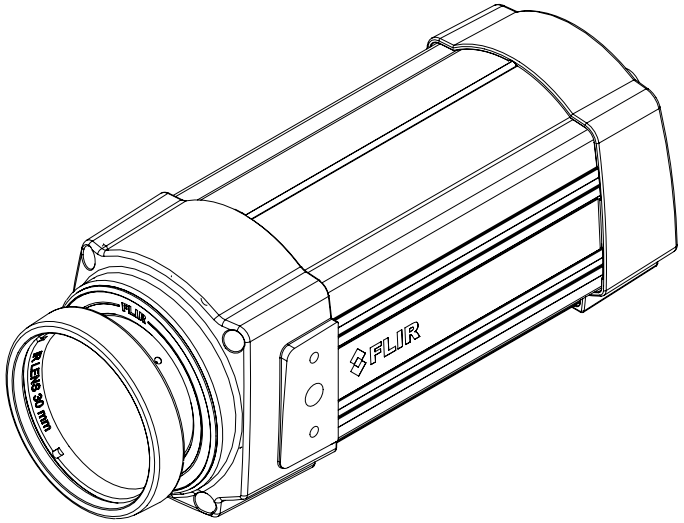
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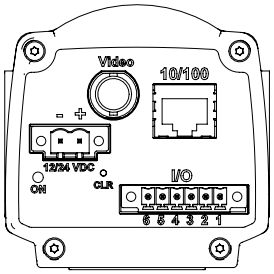
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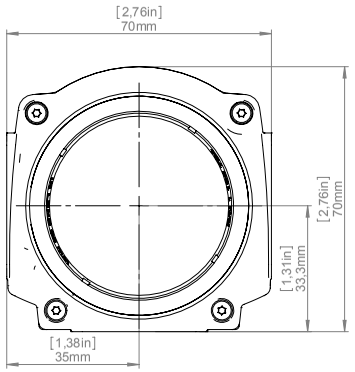
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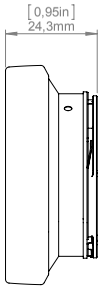
Camera with Lens IR f=30 mm (15°)











For additional dimensions see page 1

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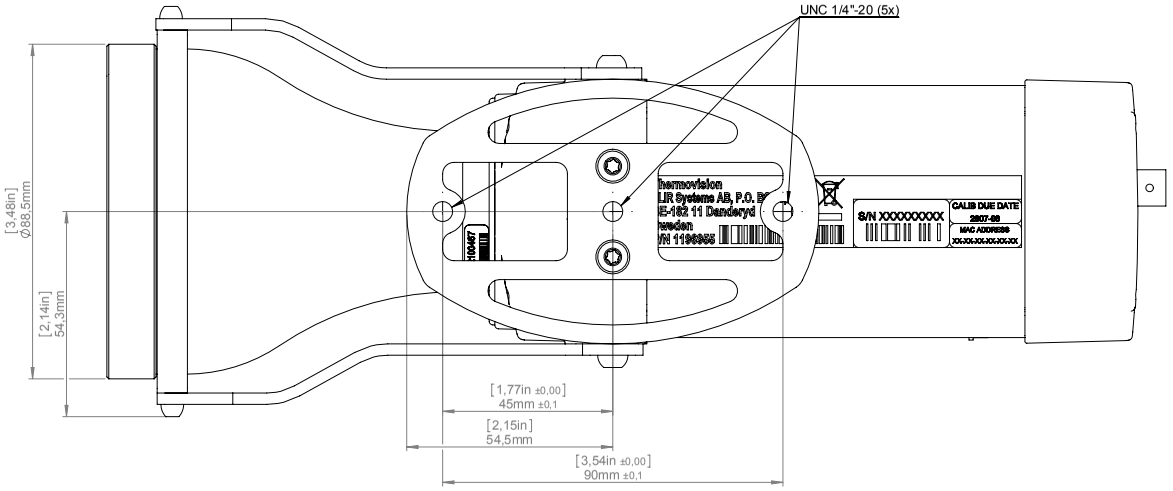
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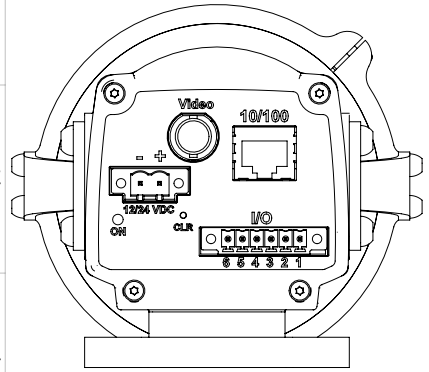
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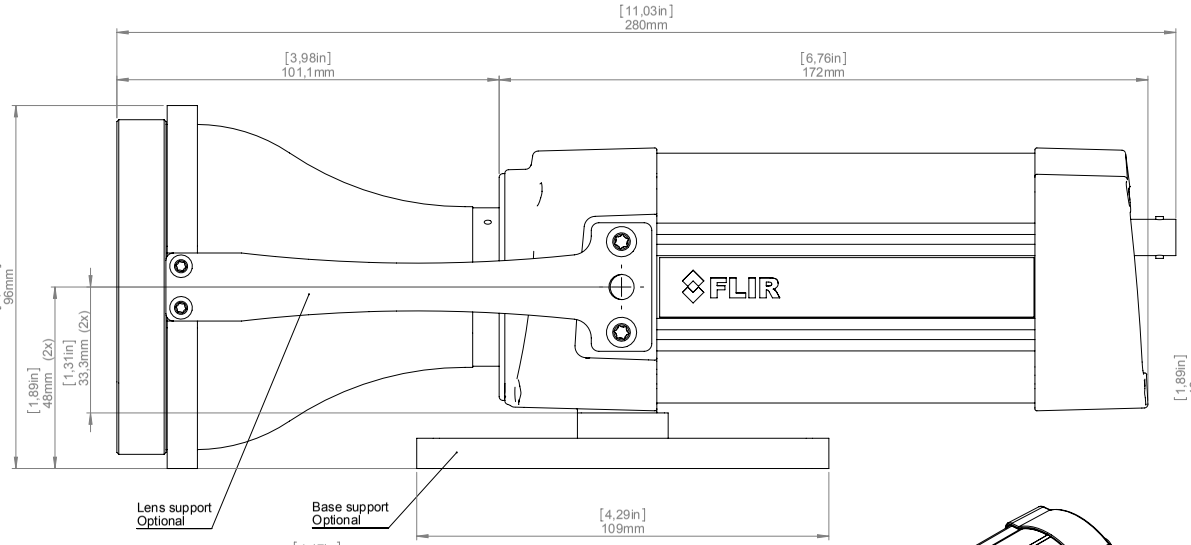
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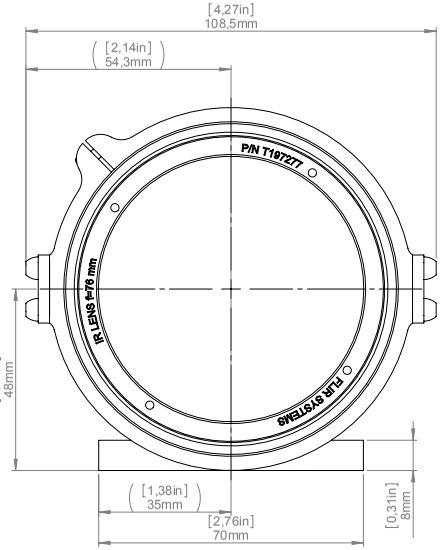
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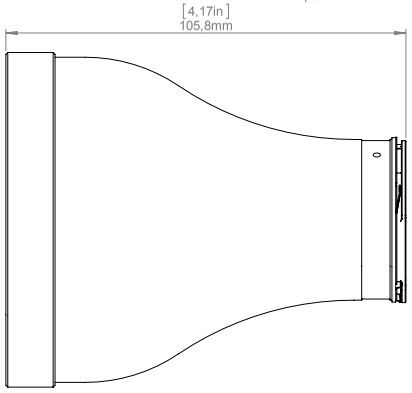
Camera with Lens IR f=76 mm (6°) incl support

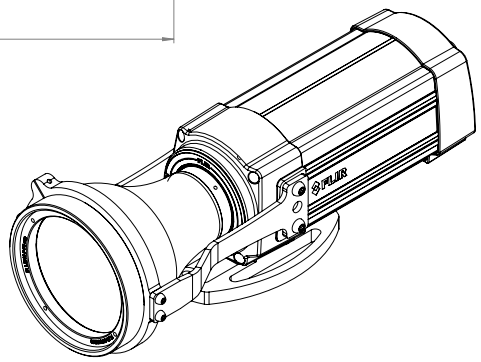












For additional dimensions see page 1

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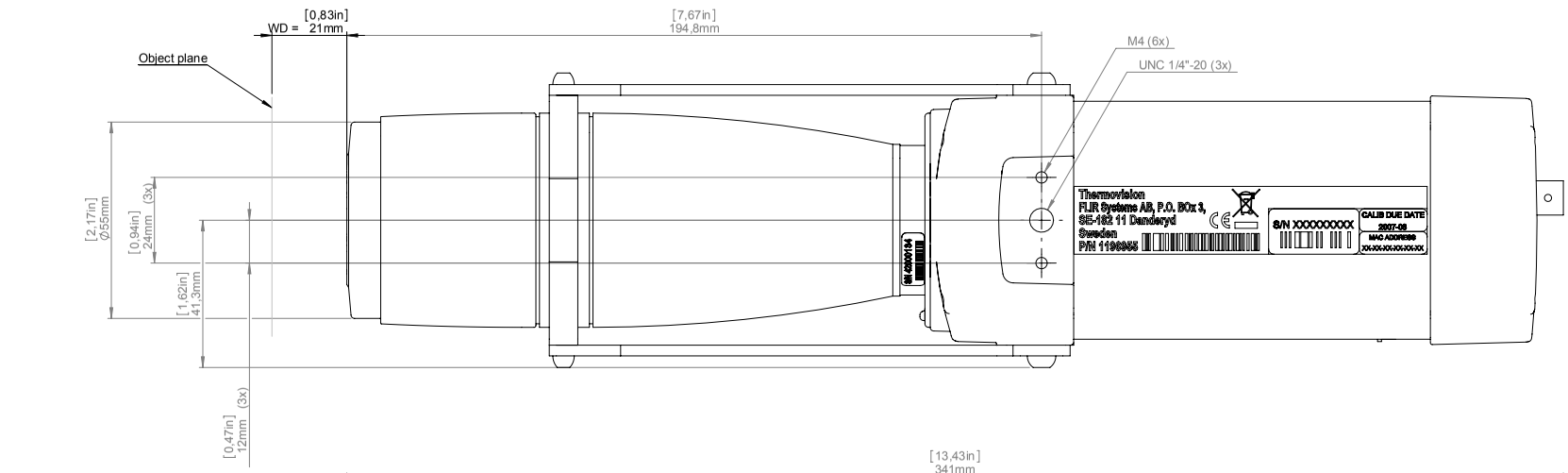
Basic dimensions FLIR A3xx/SC3xx

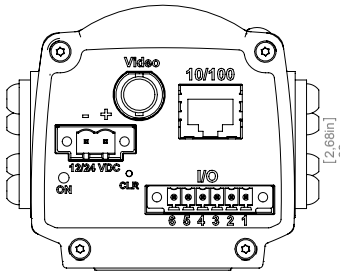
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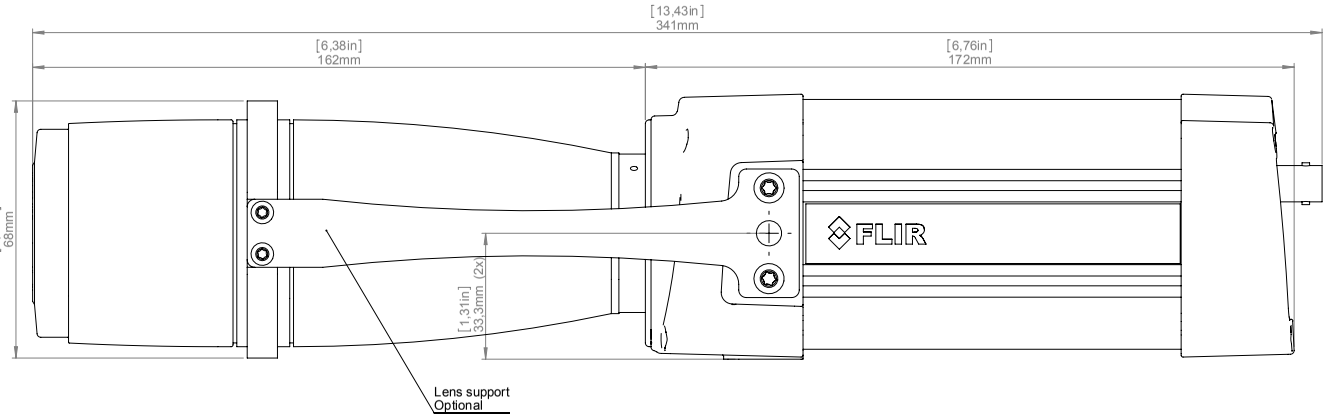
Size	Sheet
A3	5(8)
Scale 1:1	
Drawing No. T125002	Size A

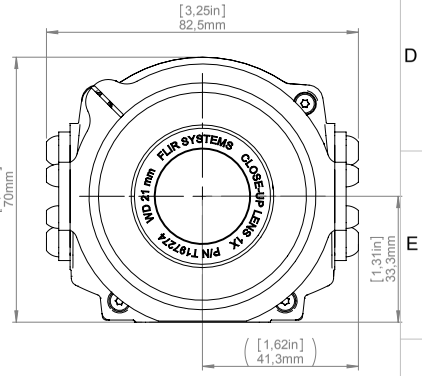
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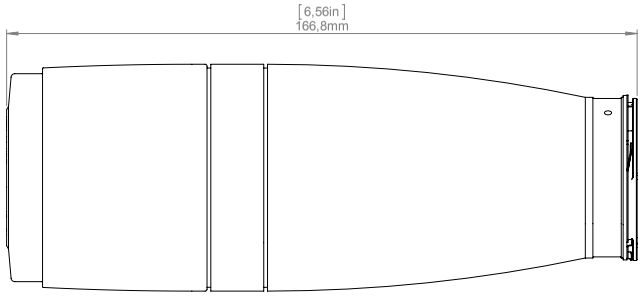
Camera with Close-up lens 1X (25 µm) incl support

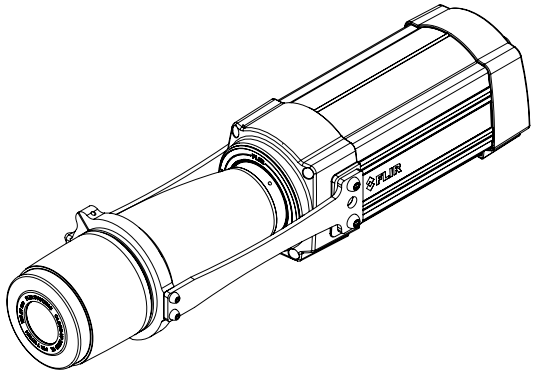












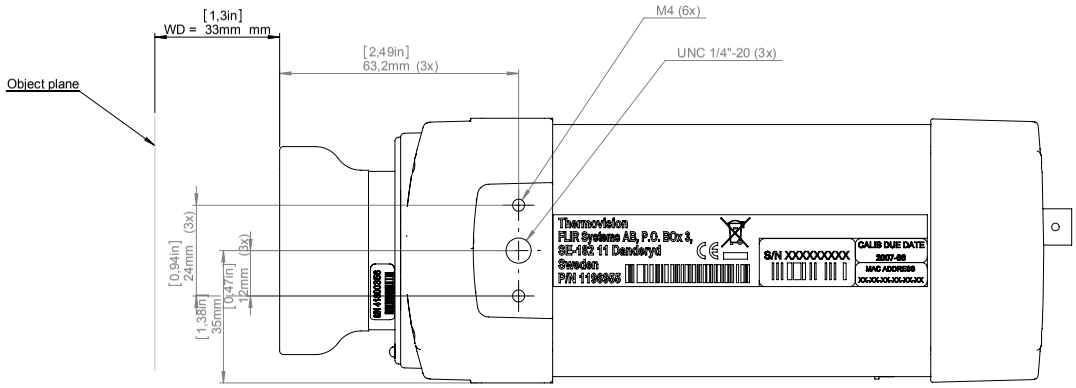
For additional dimensions see page 1

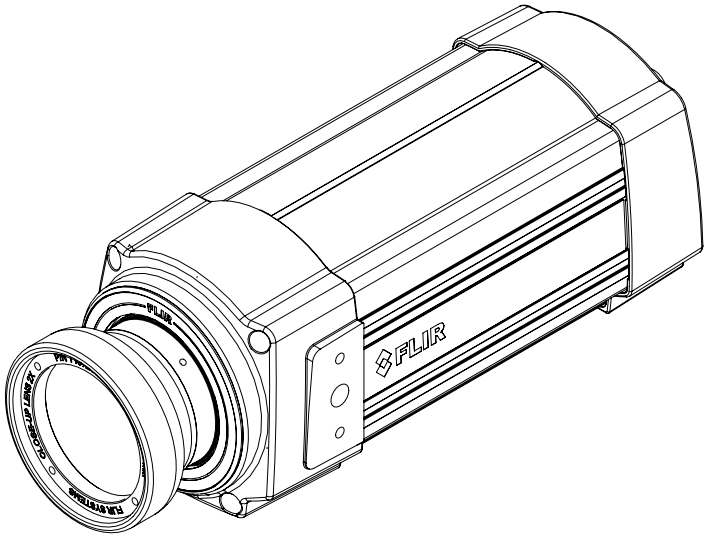
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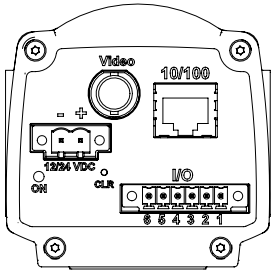
Modified	Check	Drawn by	
2012-04-18	CAHA	R&D Thermography	FLIR
Denomination		Size	
Basic dimensions FLIR A3xx/SC3xx		A3	
-		Scale 1:1	Sheet 6(8)
		Drawing No. T125002	Size A

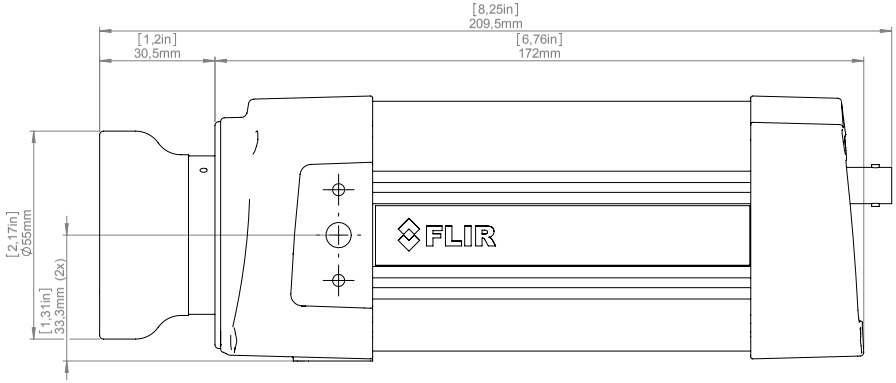
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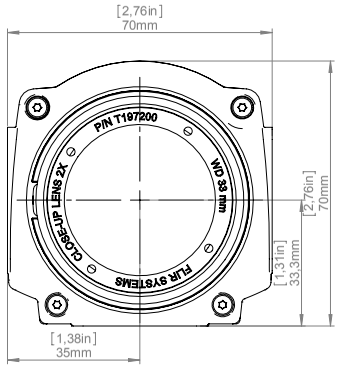
Camera with Close-up lens 2X (50 µm)

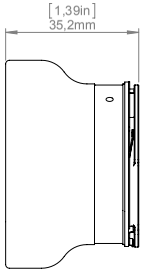












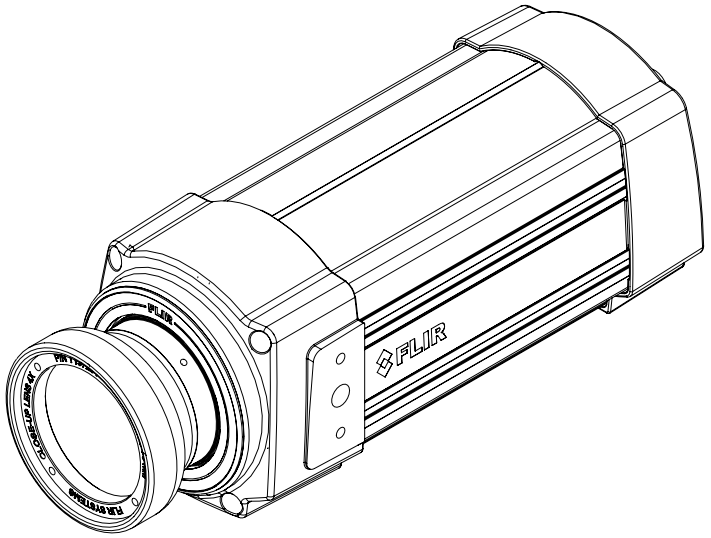
For additional dimensions see page 1

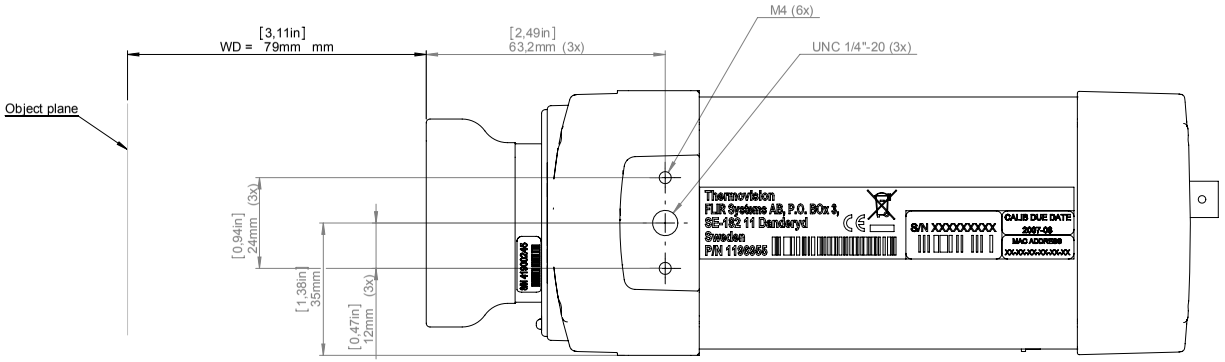
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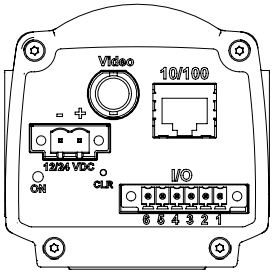
Modified	Check	Drawn by	
2012-04-18	CAHA	R&D Thermography	FLIR
Denomination		Size	A3
Basic dimensions FLIR A3xx/SC3xx		Scale	1:1
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		Sheet	7(8)
		Size	A

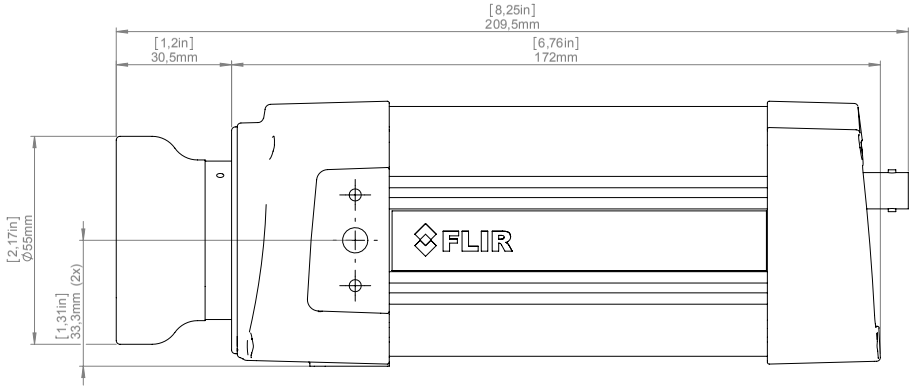
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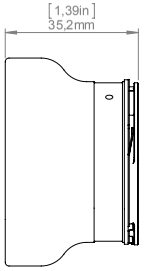
Camera with Close-up lens 4X (100 µm)

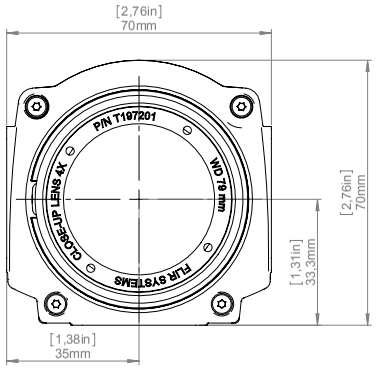












For additional dimensions see page 1

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Modified	Check	Drawn by	
2012-04-18	CAHA	R&D Thermography	FLIR

Denomination

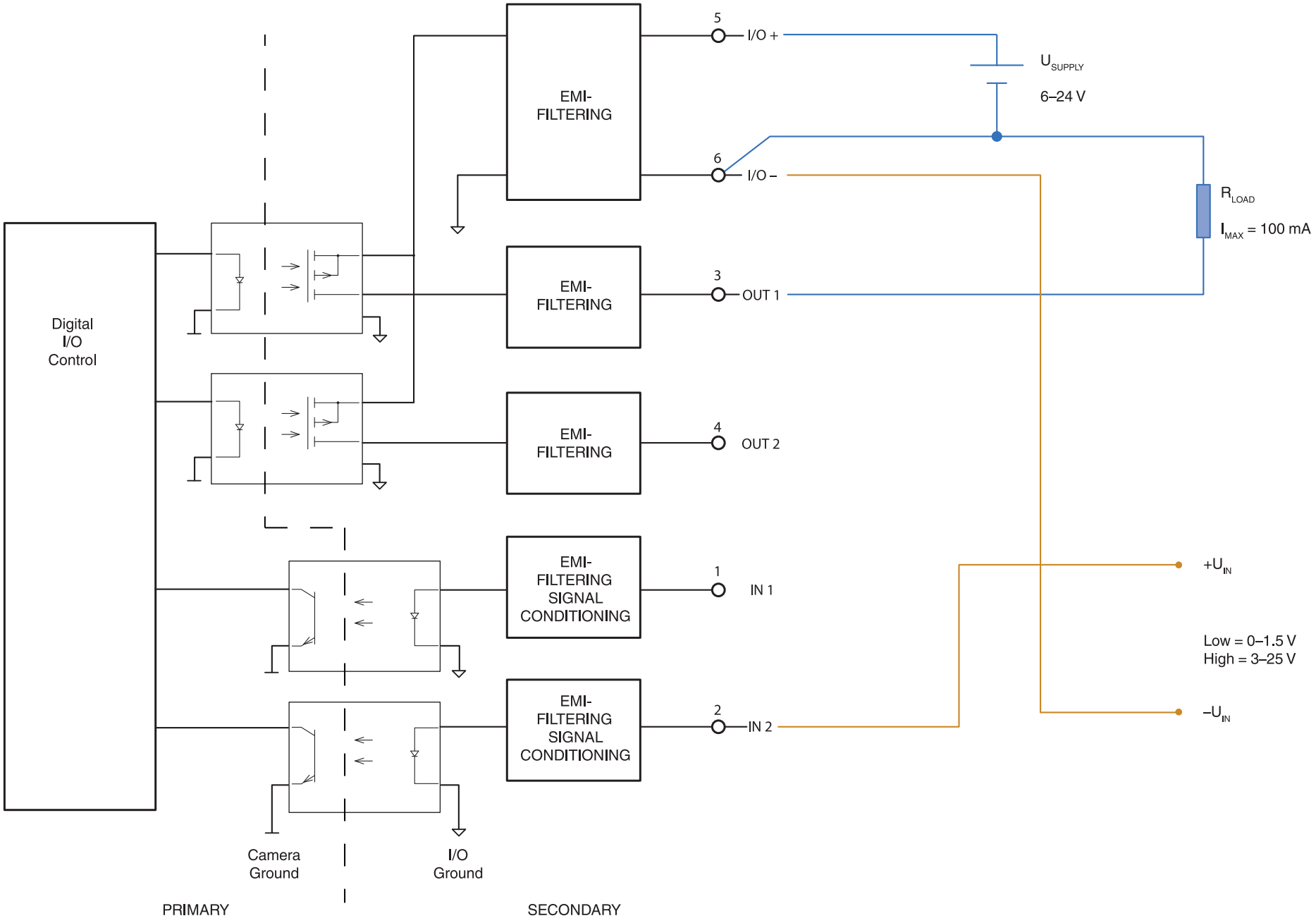
Basic dimensions FLIR A3xx/SC3xx

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Size	Sheet
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Scale 1:1	
Drawing No. T125002	Size A

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Digital I/O connection diagrams for FLIR A3xx/A6xx series



FLIR | The World's Sixth Sense™

April 24, 2017 Täby, Sweden AQ320234

CE Declaration of Conformity – EU Declaration of Conformity

Product: FLIR A3XX -series including A3XXSC

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 A3XX -series including A3XXSC.
The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Directives:

Directive	2014/30/EU	Electromagnetic Compability
Directive	2014/35/EU	Low Voltage Directive (Power Supply)
Directive	2012/19/EU	Waste electrical and electric equipment

Standards:

Emission:	EN 61000-6-3:2006	Electromagnetic Compability Generic standards – Emission
Immunity:	EN 61000-6-2:2005	Electromagnetic Compability Generic standards – Immunity
Safety (Power supply):	EN 60950-1	Information technology equipment

FLIR Systems AB
Quality Assurance

Lea Dabiri
Quality Manager