FLIR A315

P/N: 48001-1101

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Website

http://www.flir.com

Customer support

http://support.flir.com

Disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.

General description
The FLIR A315 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:
• 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. • Lenses: 25° included, 15° and 45° optional.
Typical applications:
• High-end infrared machine vision that requires 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 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	
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 × 240 pixels @ 60 Hz • Signal linear • Temperature linear • Radiometric GigE Vision and GenICam compatible
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), Image flow control, (stream on/off), Input ext. device (programmatically read)
Digital input	2 opto-isolated, 0–1.5 V = low, 3–25 V = high
Digital output, purpose	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

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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	7332558003374
UPC-12	845188003128
Country of origin	Sweden

Supplies & accessories:

- 1196961; IR lens, f=30 mm (15°) with case
- 1196960; IR lens, f=10 mm (45°) with case
- T197407; IR lens, f=76 mm (6°) with case and mounting support (for A3xx, A3xxsc)
- T197411; IR lens, f=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

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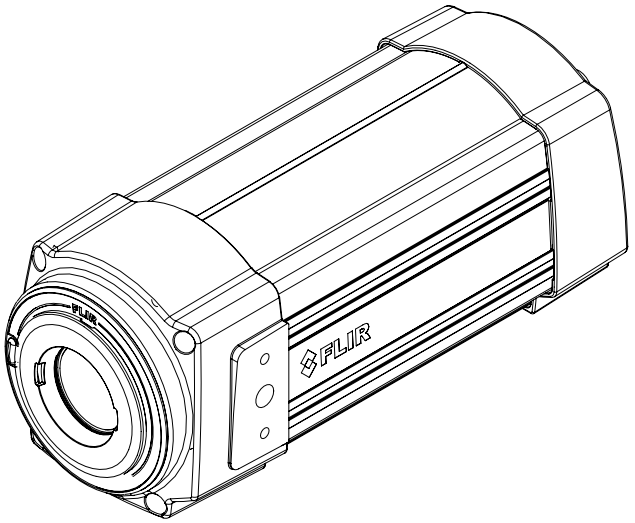
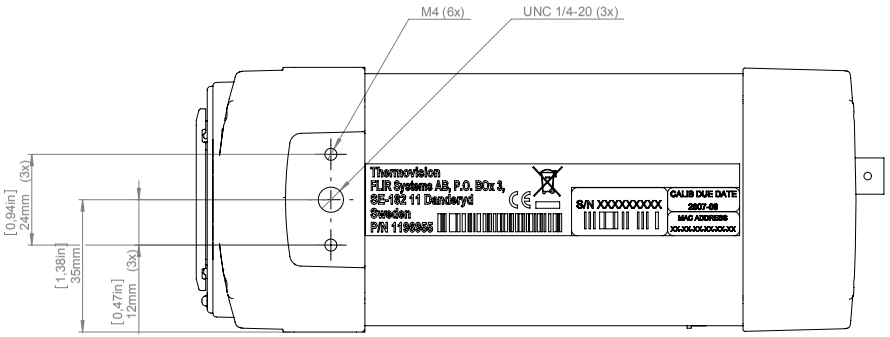
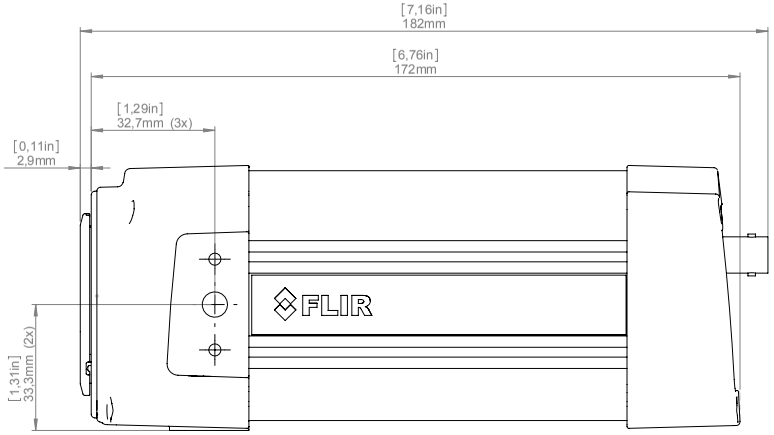
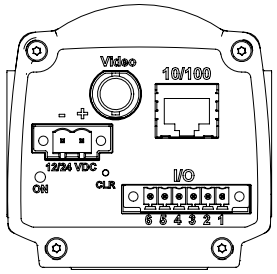
- 1910401; Power cord US
- T911803; Power supply, 24 VDC, 2 A, 50 W
- T910922; Power supply, incl. multi plugs, for A3xx, A3xxsc, A6xx and A6xxsc
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T911307ACC; Ethernet cable, CAT6, 2 m/6.6 ft, 1 screw connector
- 1910586ACC; Power cable, pigtailed
- T197870ACC; Cardboard box for FLIR A3xx/A6xx series
- T197871ACC; Hard transport case for FLIR A3xx/A6xx series
- 61301-0002; Fixed Housing for A3xx 25°/45°/90°
- 61301-0001; Fixed Housing for A3xx 7°/15°
- T199722; ThermoVision EFD, max. 2 cameras
- T199724; ThermoVision EFD, max. 4 cameras
- 500-1120-00; Pedestal Mount Assy, f-series
- 500-1121-00; Small Pole Adapter Assy, f-series
- 500-1123-00; Wall Mount Assy, f-series
- T197214; Close-up 2× (50 µm) incl. case
- T197215; Close-up 4× (100 µm) incl. case
- T198567; ThermoVision™ System Developers Kit Ver. 2.6
- T198566; ThermoVision™ LabVIEW® Digital Toolkit Ver. 3.3
- APP-10002; FLIR Tools Mobile (Android Application)
- 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
- T198584; FLIR Tools
- T198583; FLIR Tools+ (download card incl. license key)
- T199233; FLIR Atlas SDK for .NET
- T199234; FLIR Atlas SDK for MATLAB
- 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)
- 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

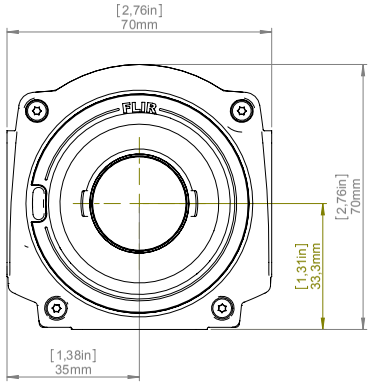
Camera with built-in IR lens f=18 mm (25°)











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

Denomination

Basic dimensions FLIR A3xx/SC3xx

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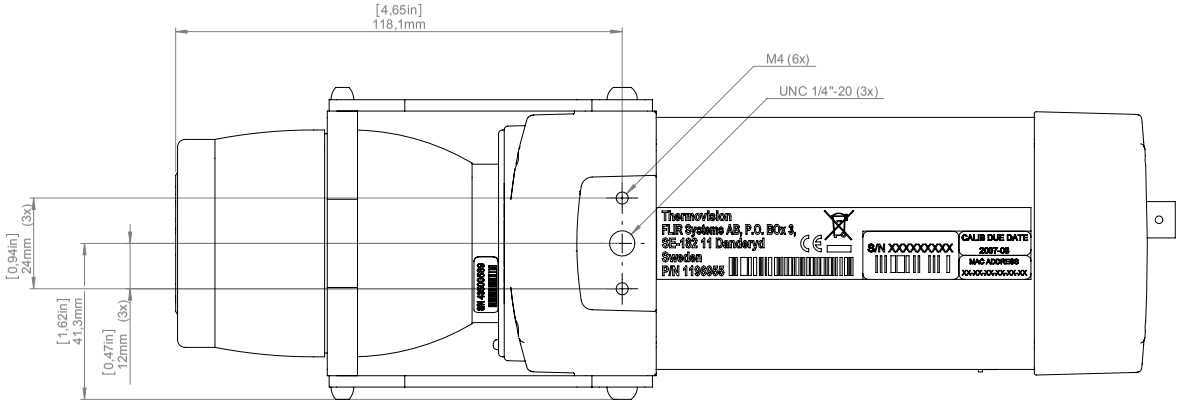
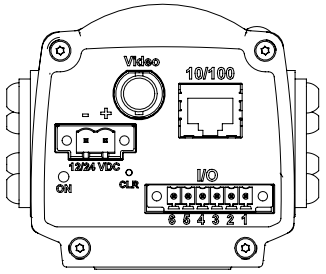
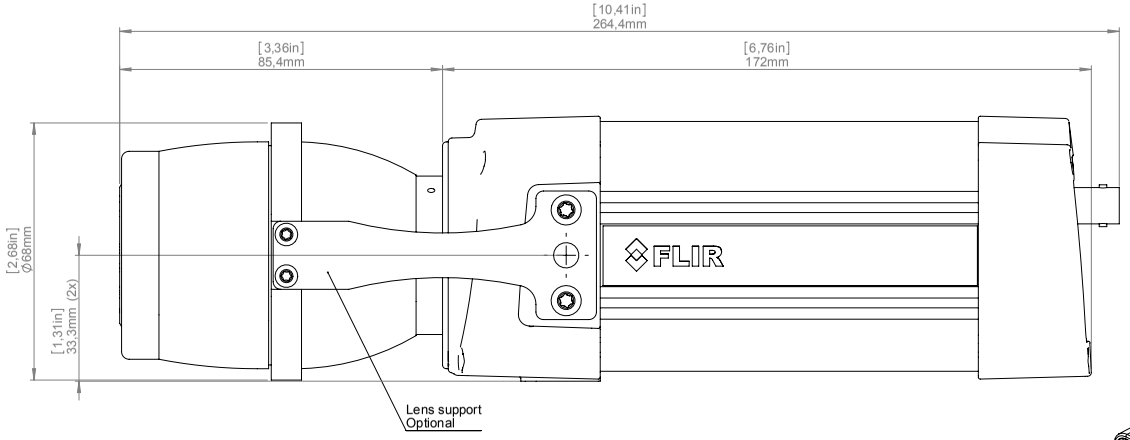
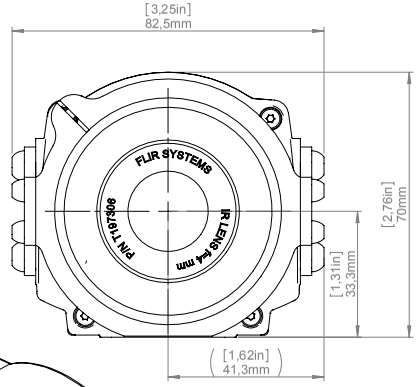
Size A3 | Scale 1:1 | Sheet 1(8) | Drawing No. T125002 | Size A

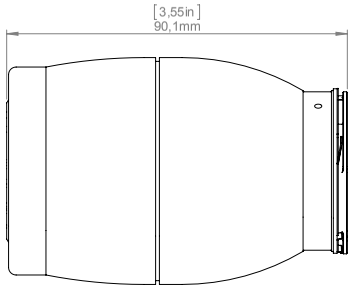
Camera with Lens IR f=4 mm (90°) incl support

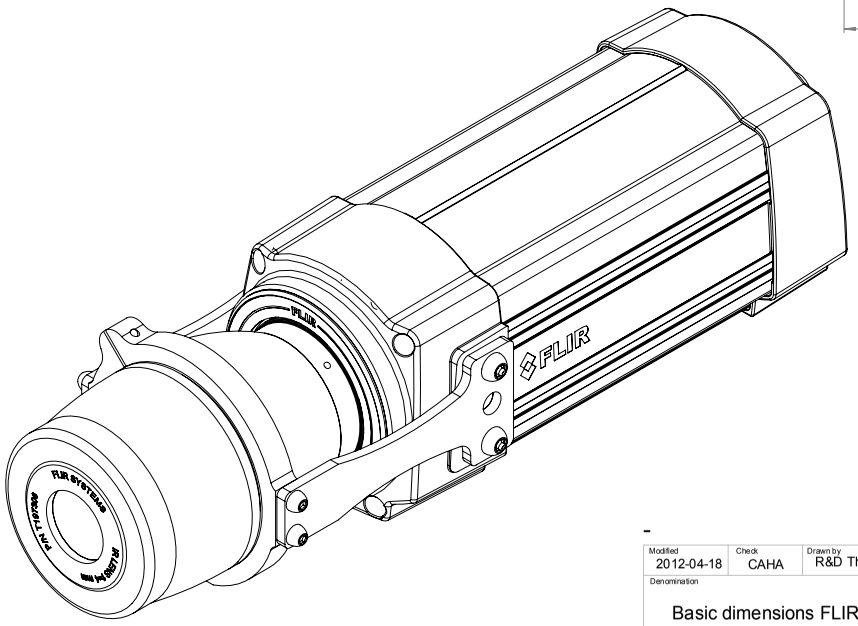












For additional dimensions see page 1

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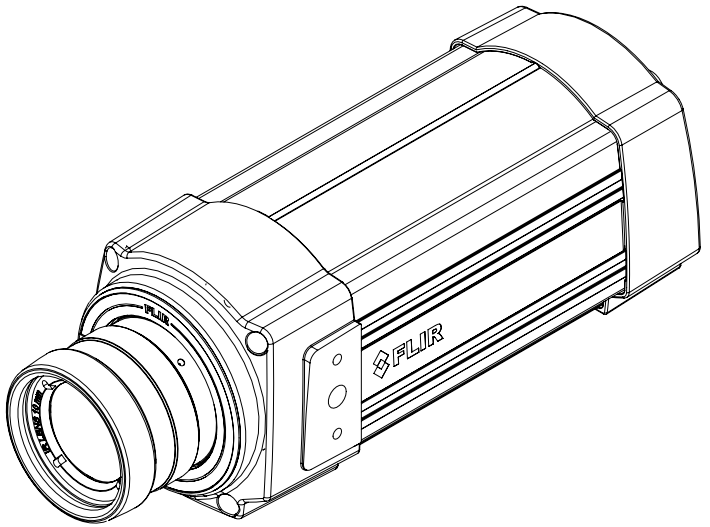
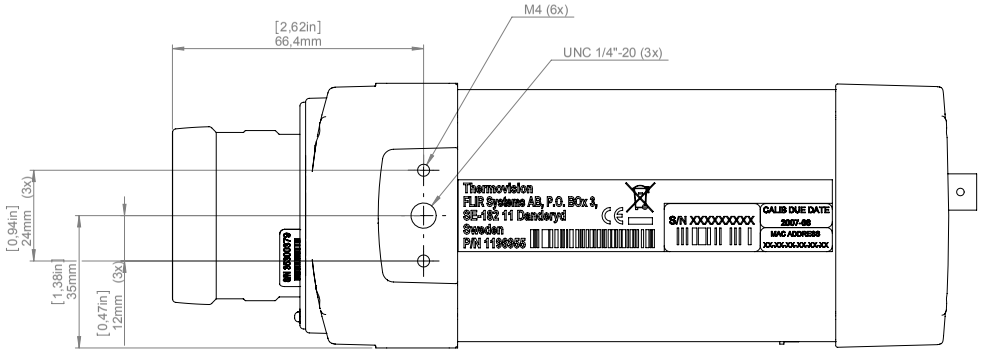
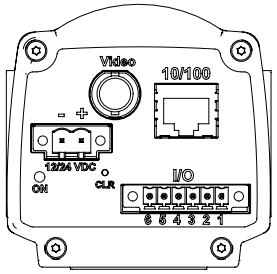
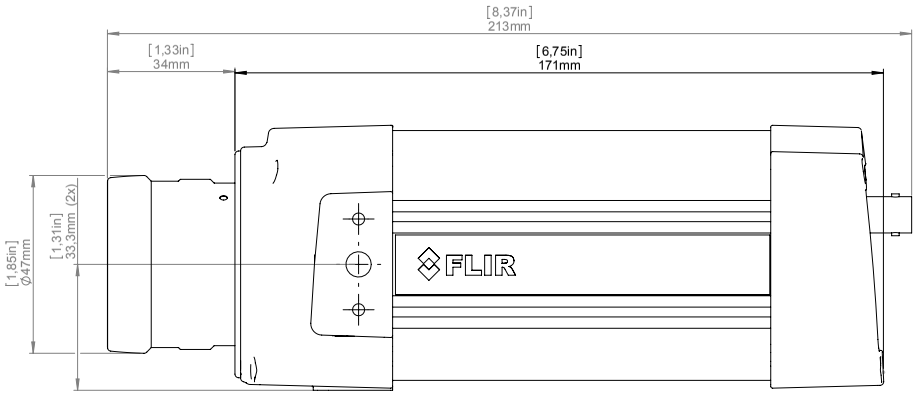
Modified	Check	Drawn by	
2012-04-18	CAHA	R&D Thermography	FLIR
Denomination		Size	
Basic dimensions FLIR A3xx/SC3xx		A3	
-		Scale 1:1	Sheet 2(8)
		Drawing No. T125002	Size A

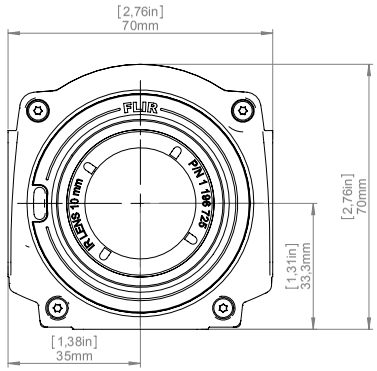
Camera with Lens IR f=10 mm (45°)

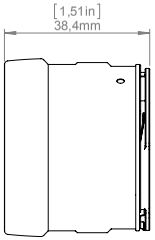












For additional dimensions see page 1

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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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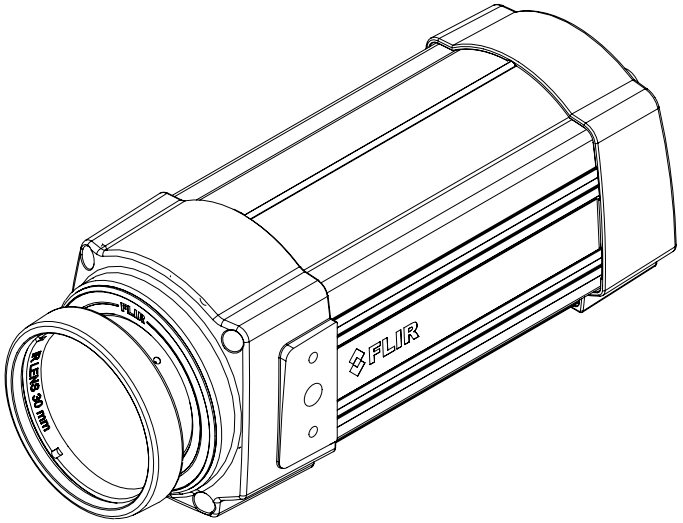
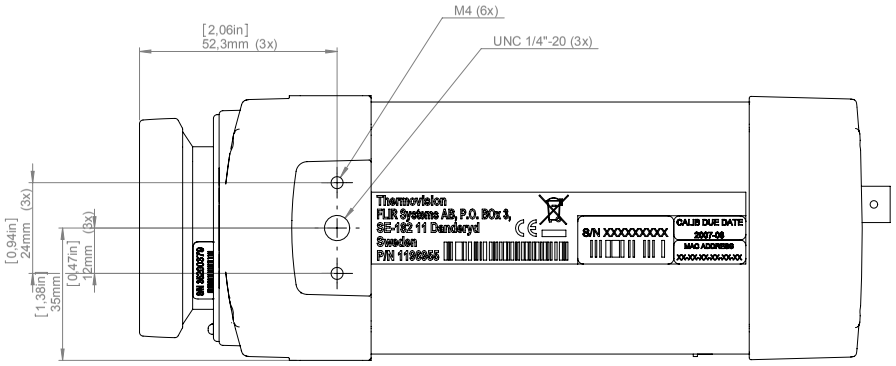
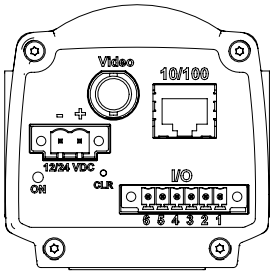
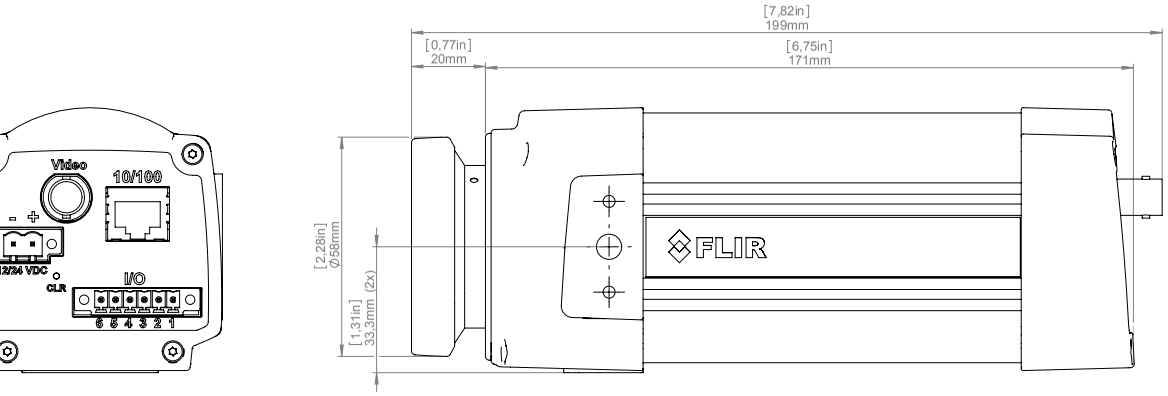
Size	Sheet
A3	3(8)
Scale 1:1	
Drawing No. T125002	Size A

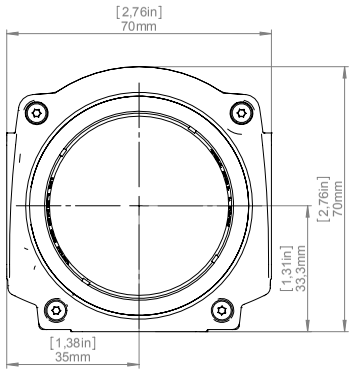
Camera with Lens IR f=30 mm (15°)

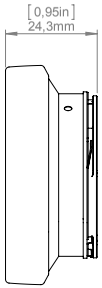












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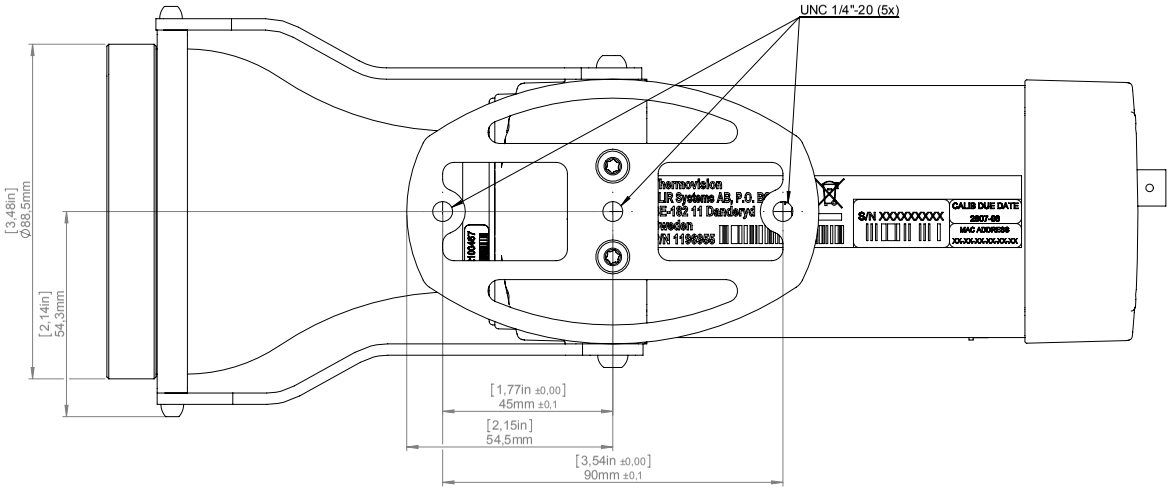
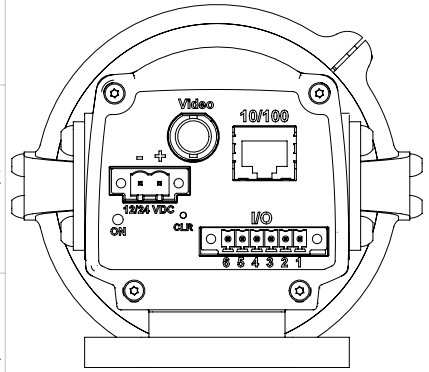
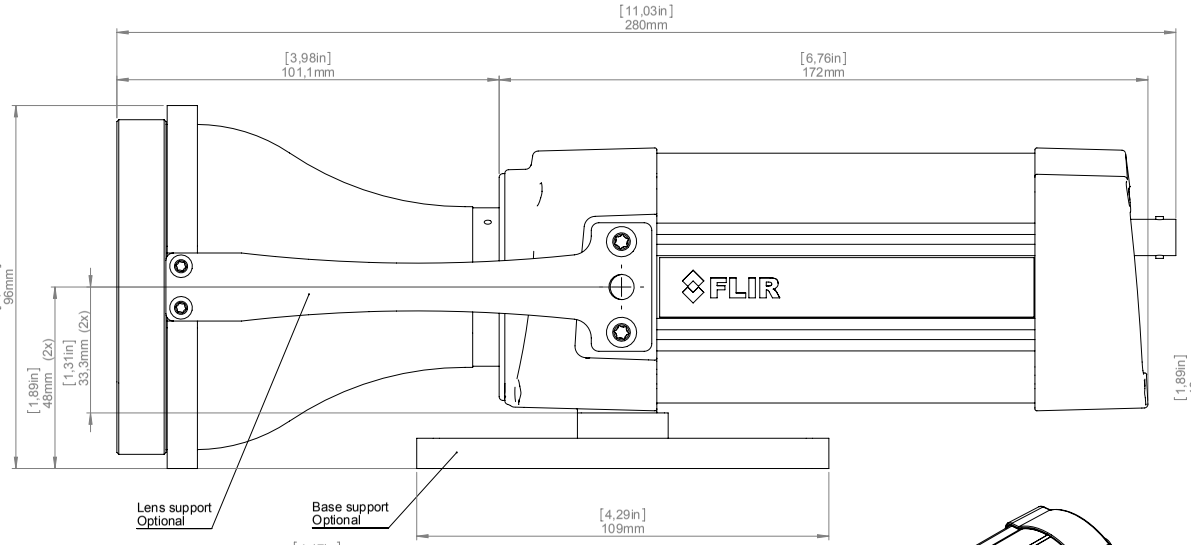
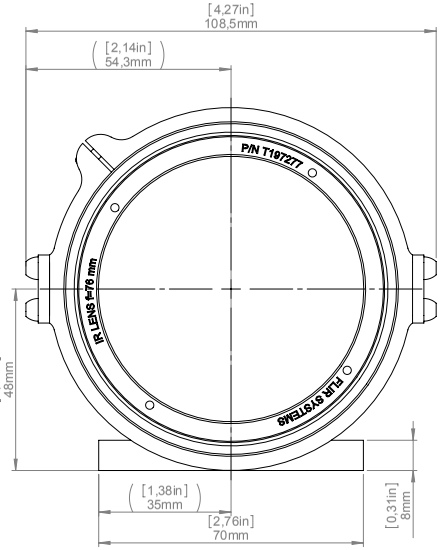
2012-04-18	CAHA	R&D Thermography	FLIR
Denomination		Size	
Basic dimensions FLIR A3xx/SC3xx		A3	
-		Scale 1:1	Sheet 4(8)
		Drawing No. T125002	Size A

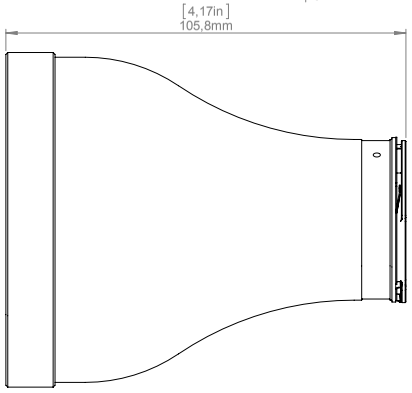
Camera with Lens IR f=76 mm (6°) incl support

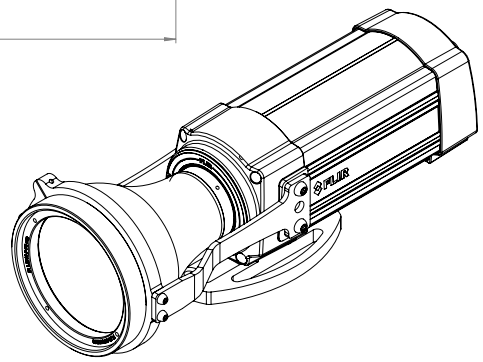












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2012-04-18	CAHA	R&D Thermography	FLIR

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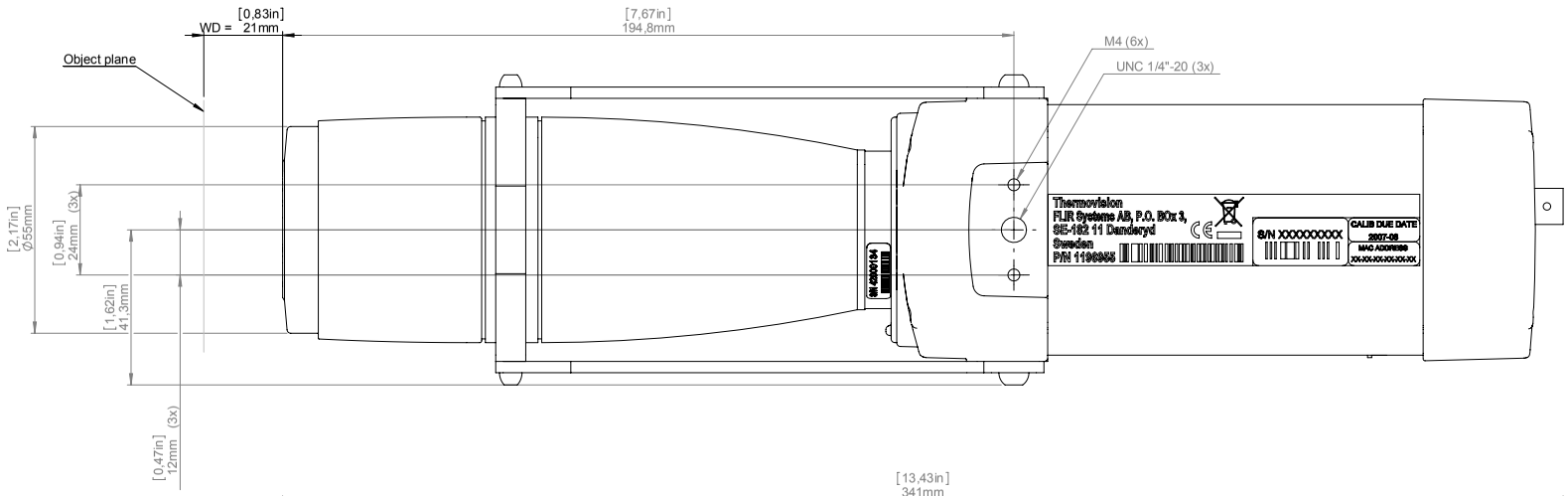
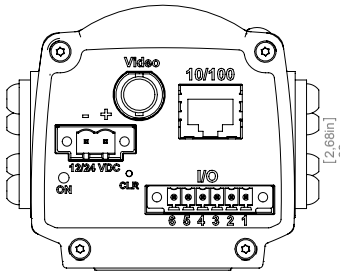
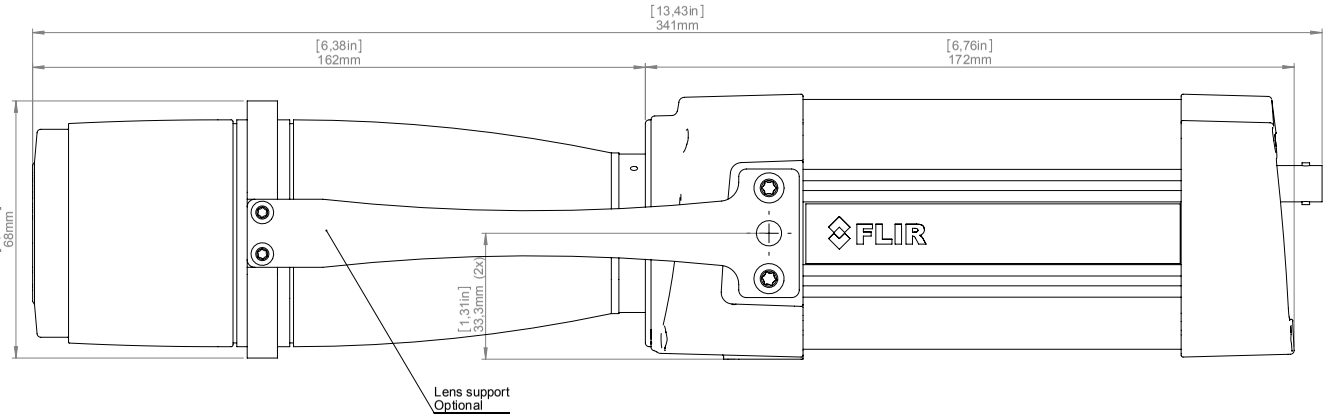
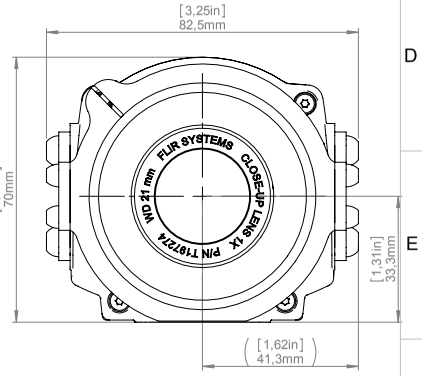
Size	Sheet
A3	5(8)
Scale 1:1	
Drawing No. T125002	Size A

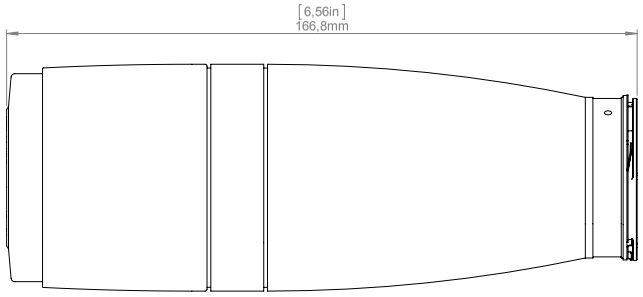
Camera with Close-up lens 1X (25 µm) incl support

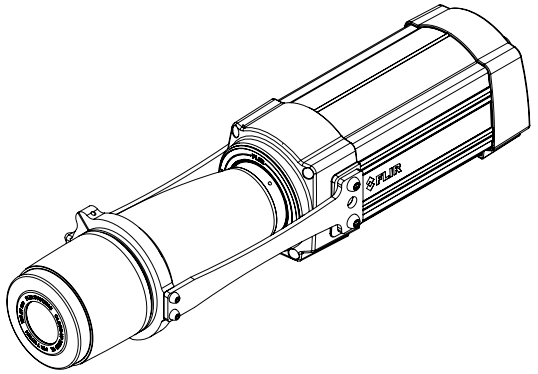












For additional dimensions see page 1

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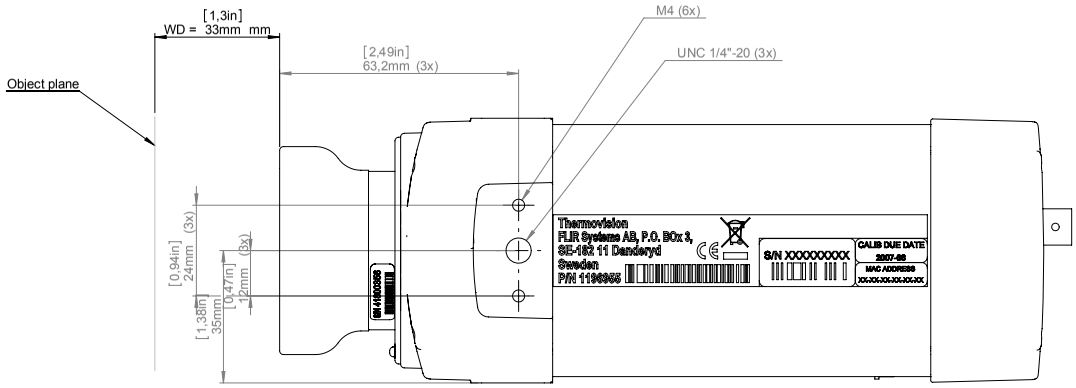
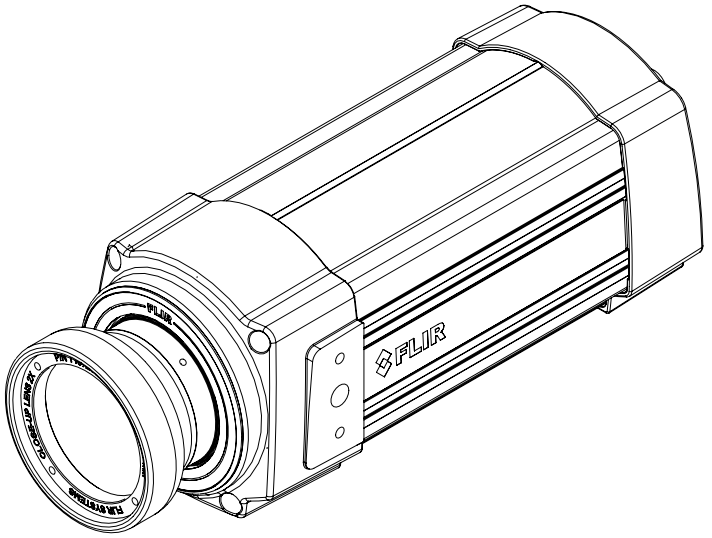
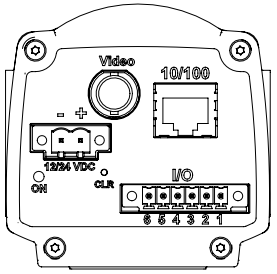
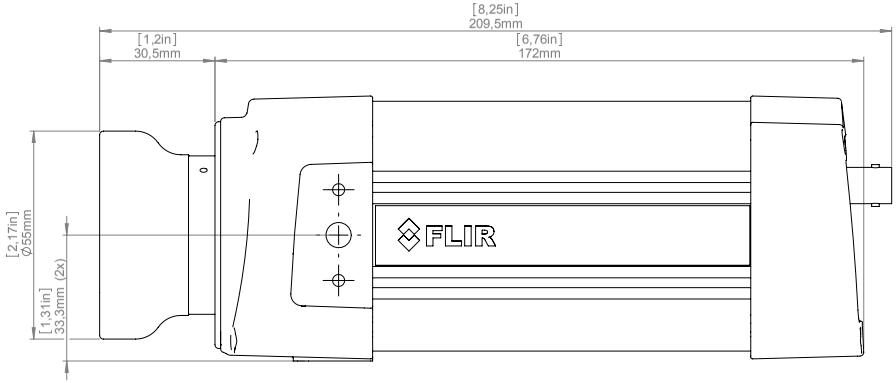
2012-04-18	CAHA	R&D Thermography	FLIR
Denomination		Size	
Basic dimensions FLIR A3xx/SC3xx		A3	
-		Scale 1:1	Sheet 6(8)
		Drawing No. T125002	Size A

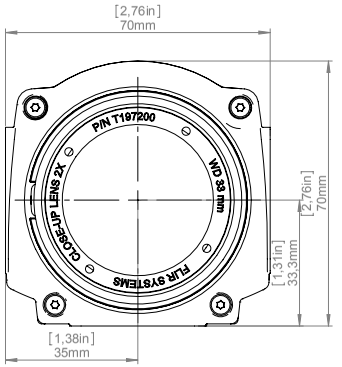
Camera with Close-up lens 2X (50 µm)

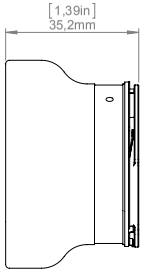












For additional dimensions see page 1

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

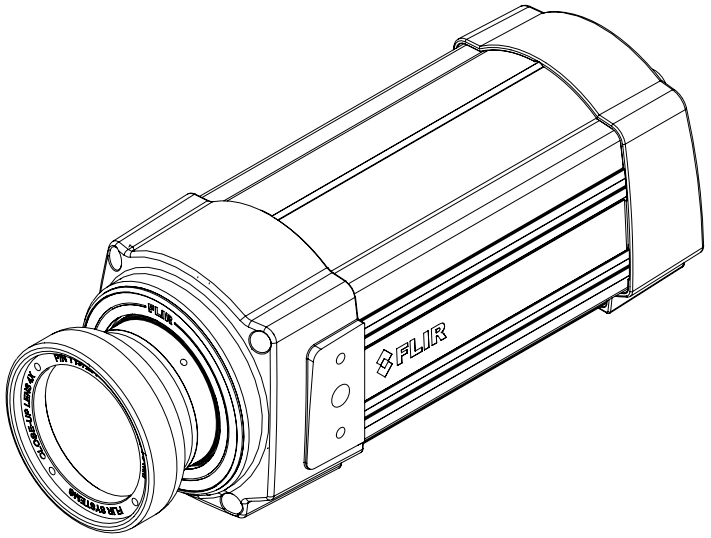
Denomination

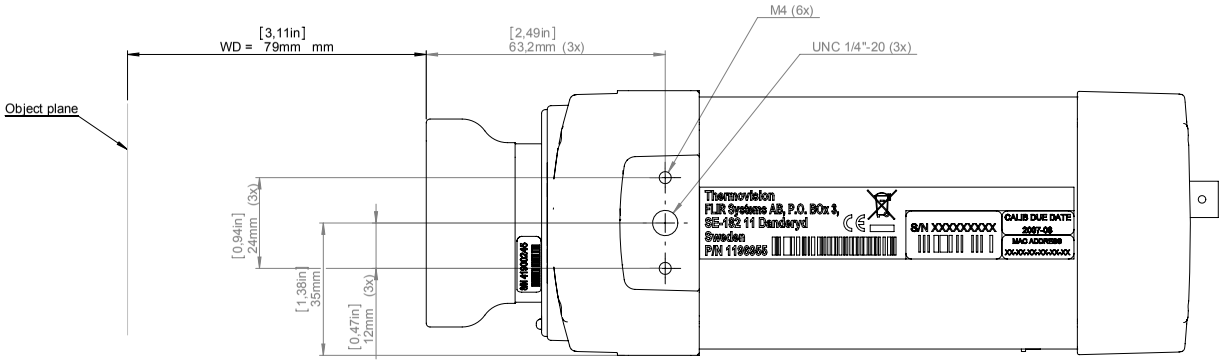
Basic dimensions FLIR A3xx/SC3xx

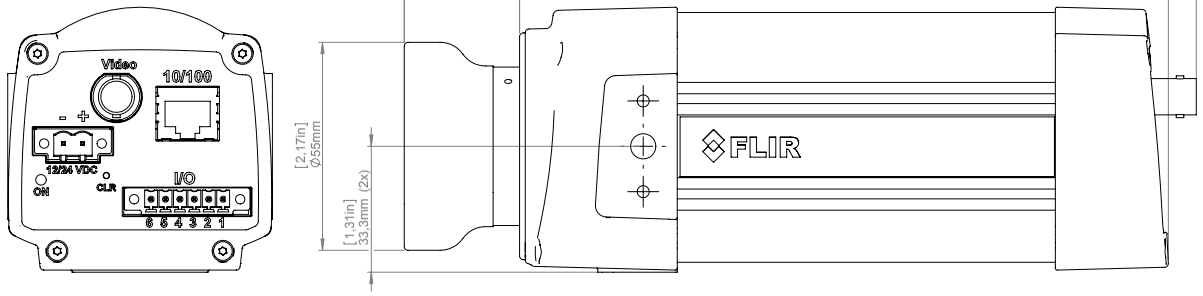
-

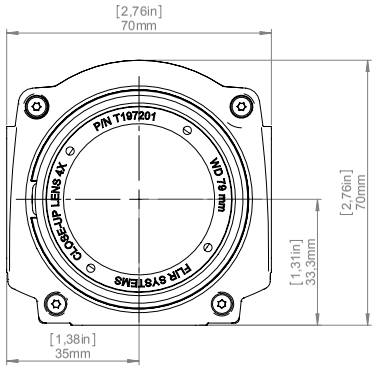
Size	Sheet
A3	7(8)
Scale 1:1	
Drawing No. T125002	Size A

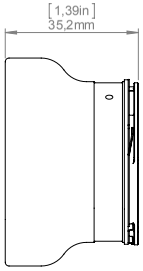
Camera with Close-up lens 4X (100 µm)











For additional dimensions see page 1

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

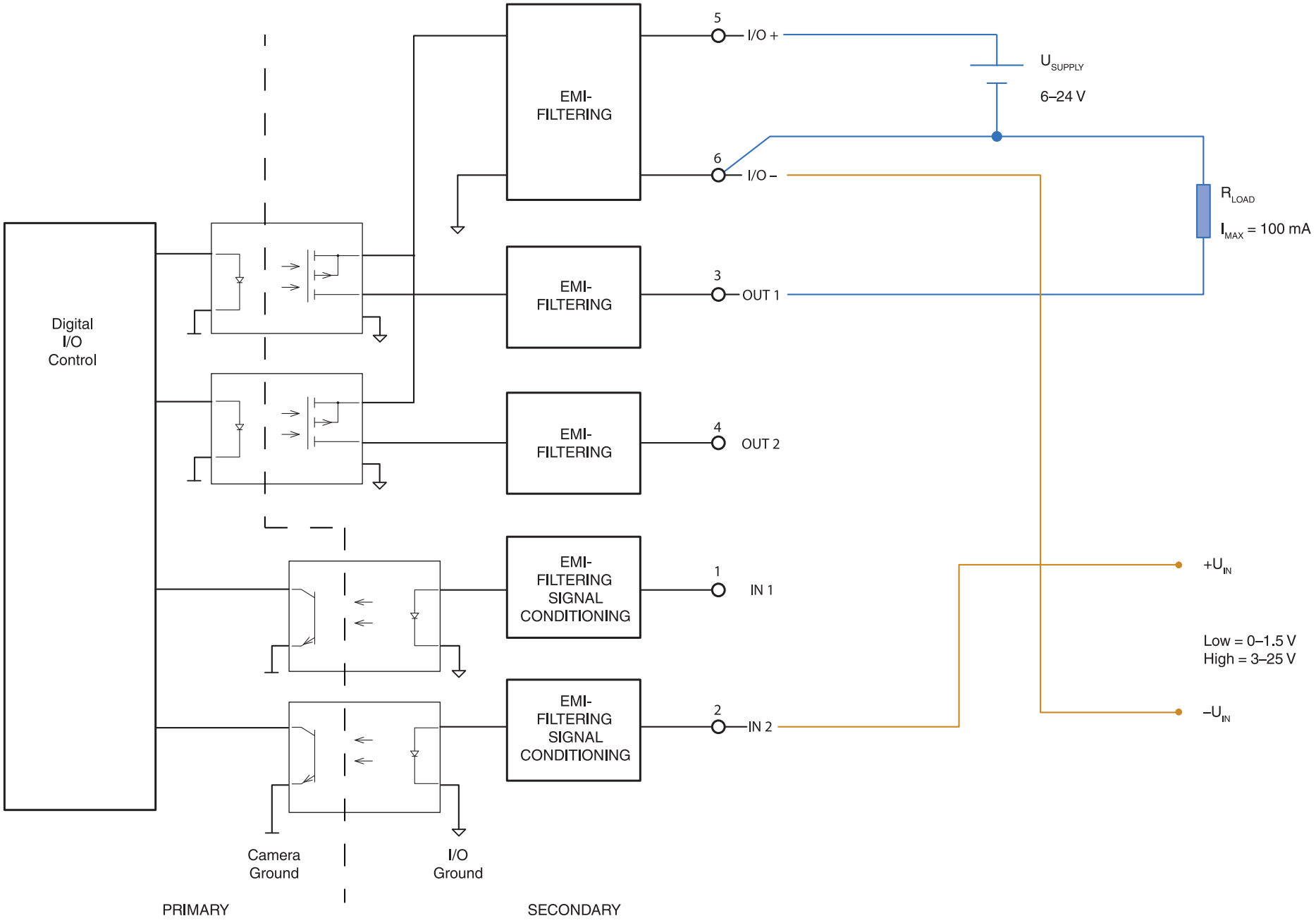
Denomination

Basic dimensions FLIR A3xx/SC3xx

-

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

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