



FLIR A320 Tempscreen (9 Hz)

P/N: 42701-1201

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General description

The FLIR A320 Tempscreen (9 Hz) is a camera preconfigured to work well in applications where you need 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 provides 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	9 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
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, 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 1/4"-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	7332558003404
UPC-12	845188003159
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



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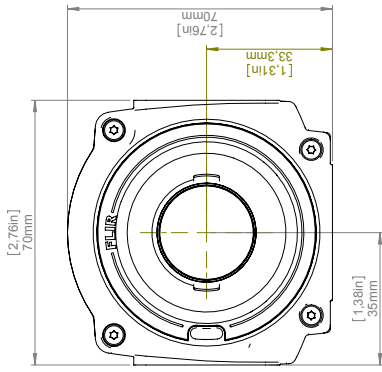
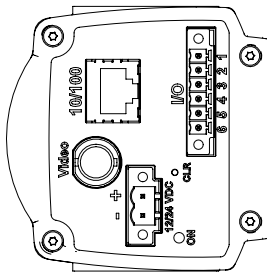
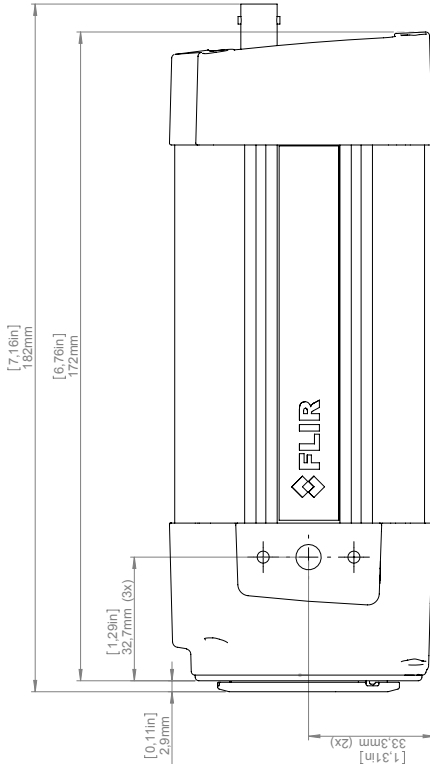
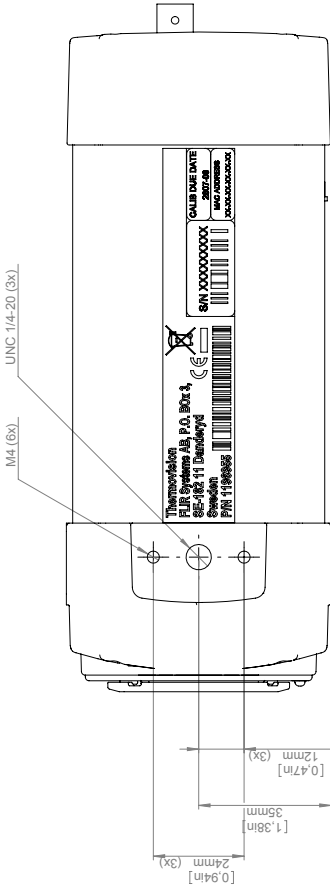
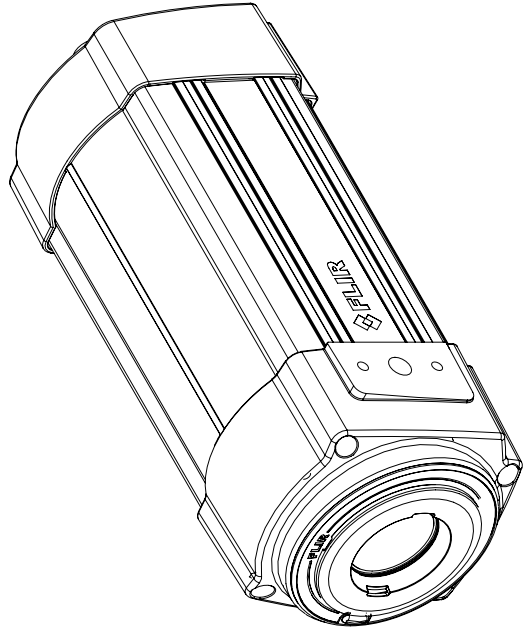
- 1910401; Power cord US
- T911803; Power supply, 24 VDC, 2 A, 50 W
- T910922; Power supply, incl. multi plugs, for A3xx, A3xxsc, A6xx and A6xxsc
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T911307ACC; Ethernet cable, CAT6, 2 m/6.6 ft, 1 screw connector
- 1910586ACC; Power cable, pigtailed
- 908929; Video cable, 3.0 m/9.8 ft.
- T197871ACC; Hard transport case for A3xx/A6xx series
- T197870ACC; Cardboard box for A3xx/A6xx series
- T197214; Close-up 2× (50 µm) incl. case
- T197215; Close-up 4× (100 µm) incl. case
- 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)
- 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

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



Modified
2012-04-18

Drawn by
CAHA

Checked
R&D Thermography

Size
A3

Scale
1:1

Sheet
1(8)

Drawing No.
T125002

Size
A

Basic dimensions FLIR A3xx/SC3xx

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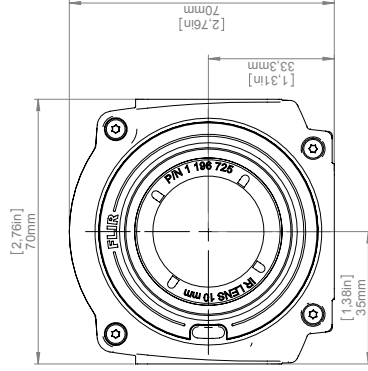
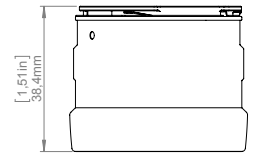
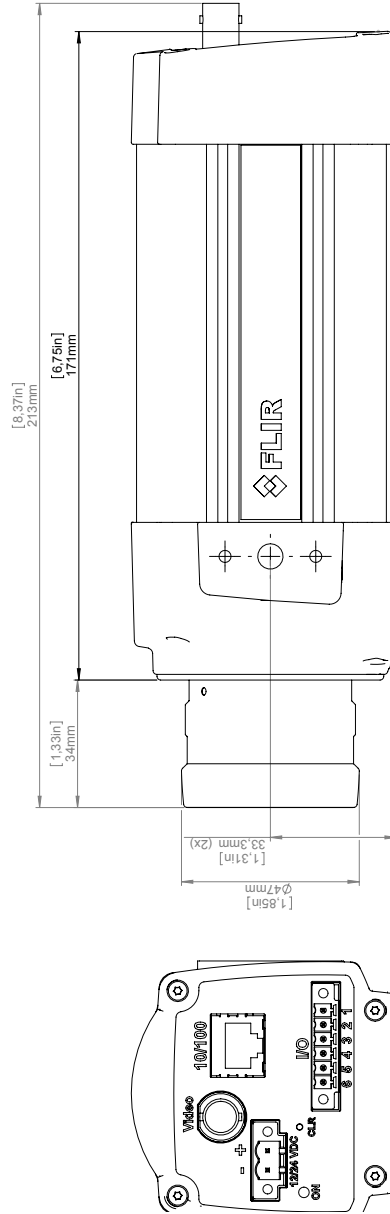
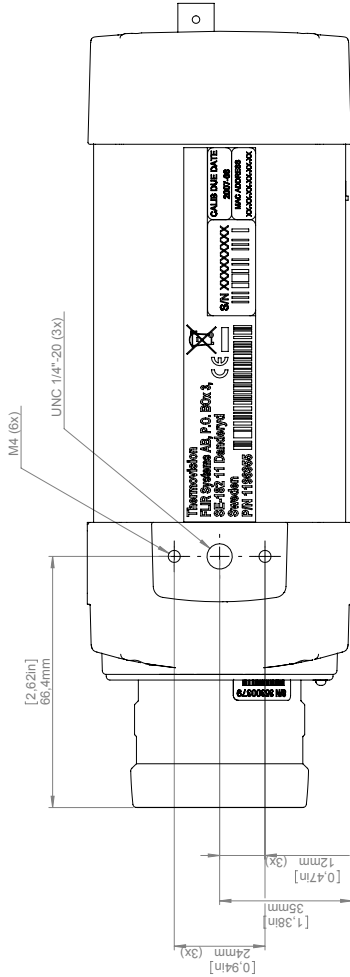
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Discontinuation			Size A3	Scale 1:1	Notes 3(8)
Basic dimensions FLIR A3xx/SC3xx			Drawing No.	Size	A
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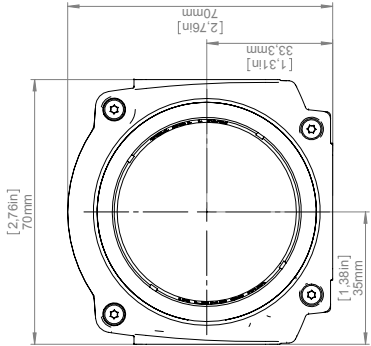
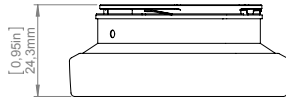
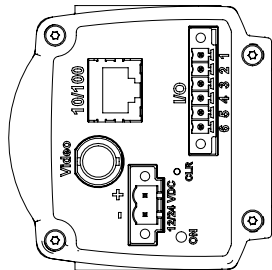
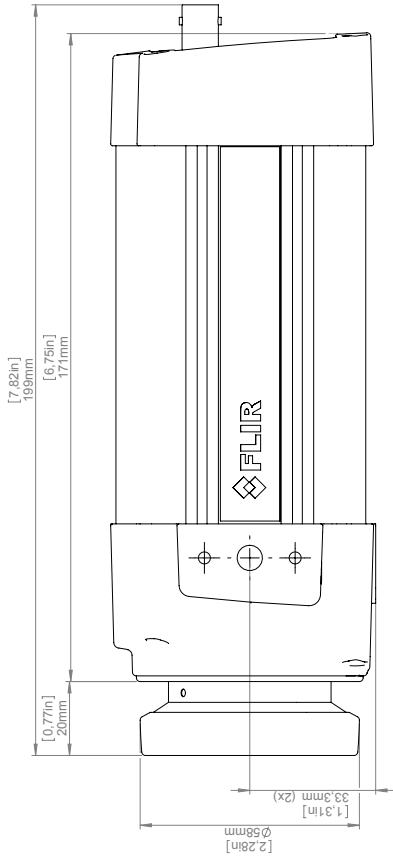
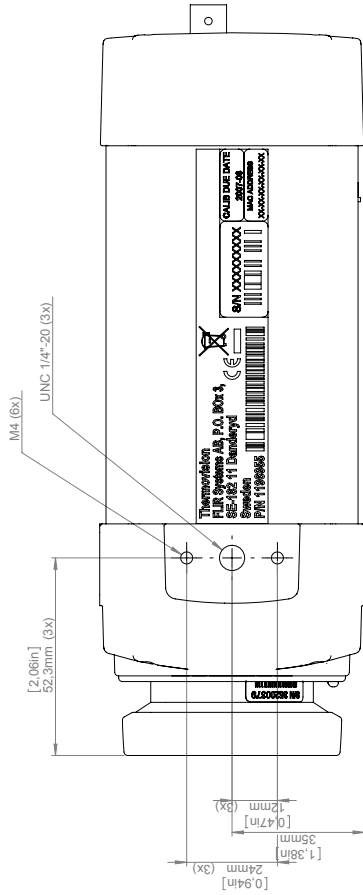
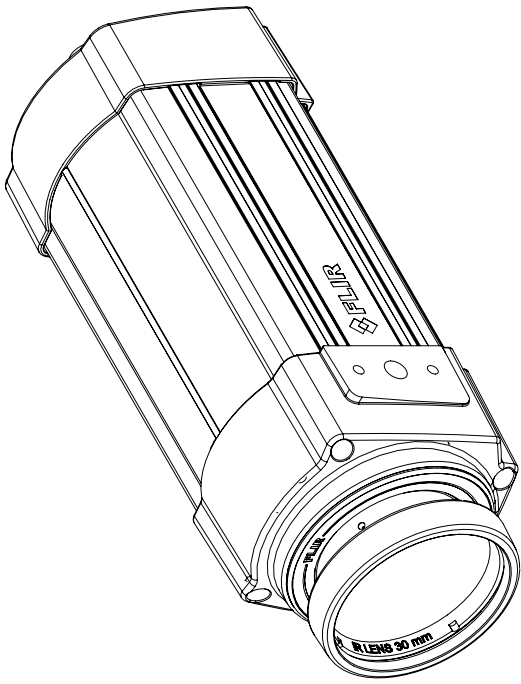
Basic dimensions FLIR A3xx/SC3xx

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Camera with Lens IR f=30 mm (15°)



For additional dimensions see page 1

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Basic dimensions FLIR A3xx/SC3xx							

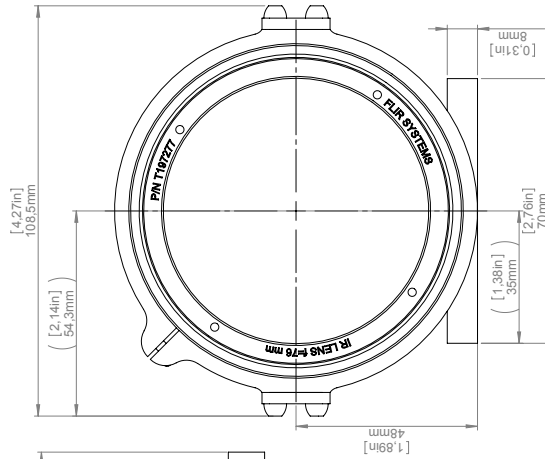
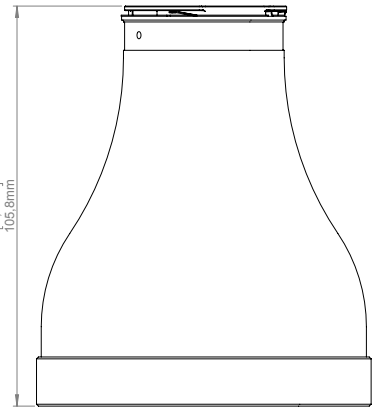
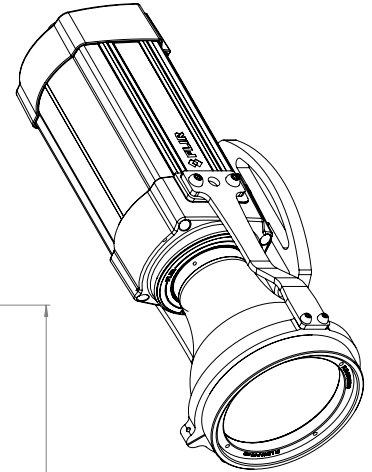
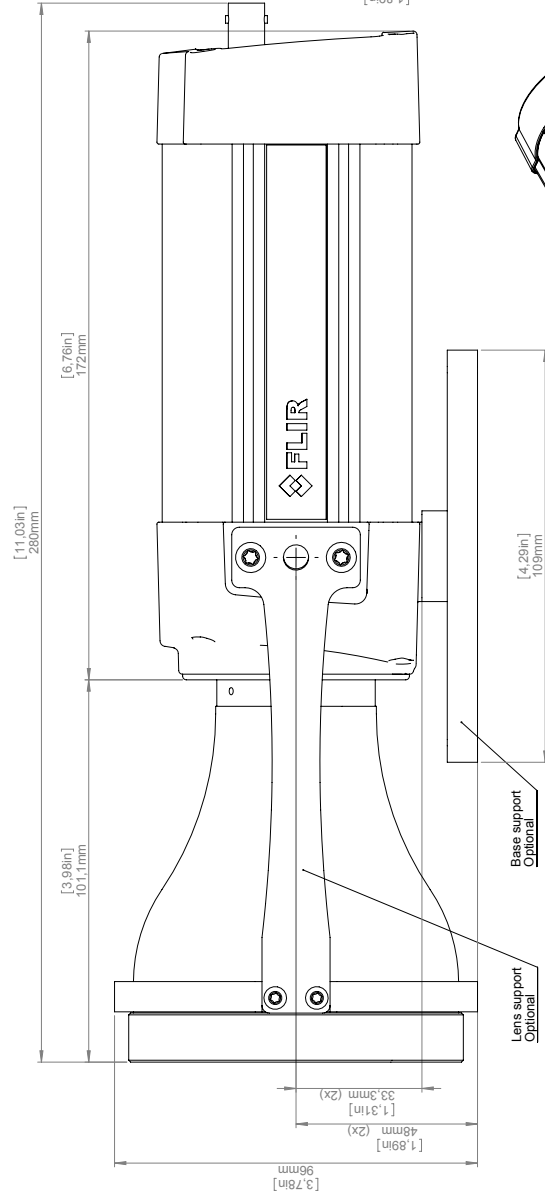
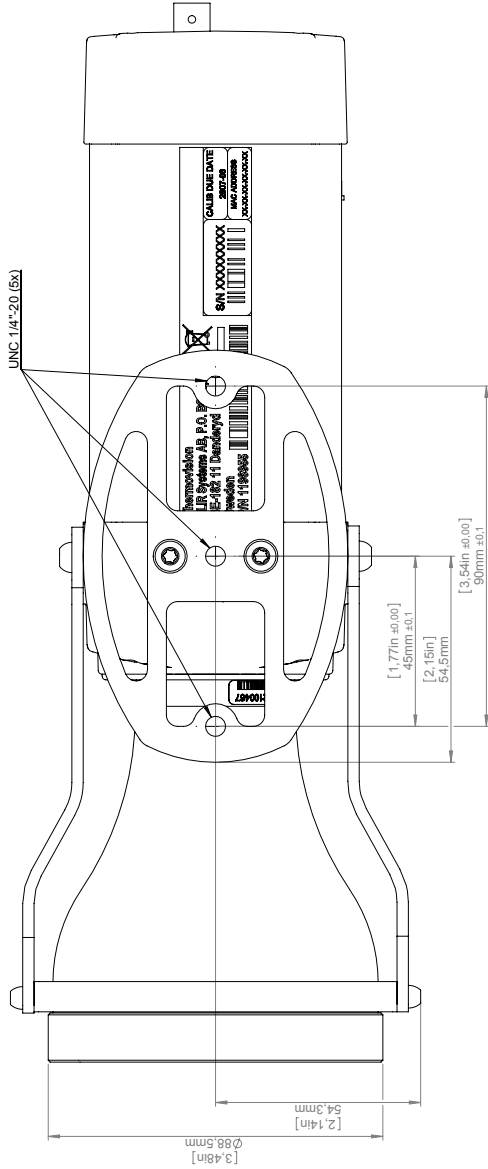
mera with Lens IR f=76 mm (6°) incl support

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For additional dimensions see page 1

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2012-04-18	CAHA	R&D Thermography

FIELD

Denomination	Size	A3
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Basic dimensions FLIR A3xx/SC3xx

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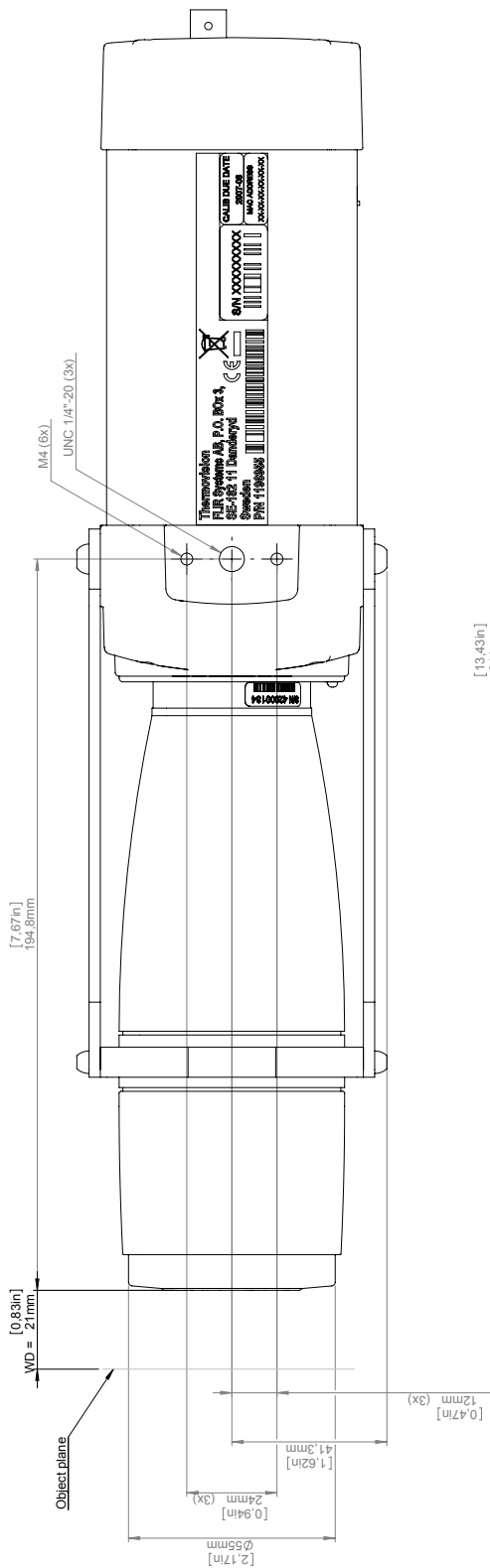
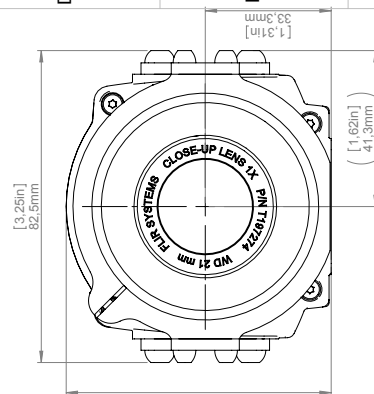
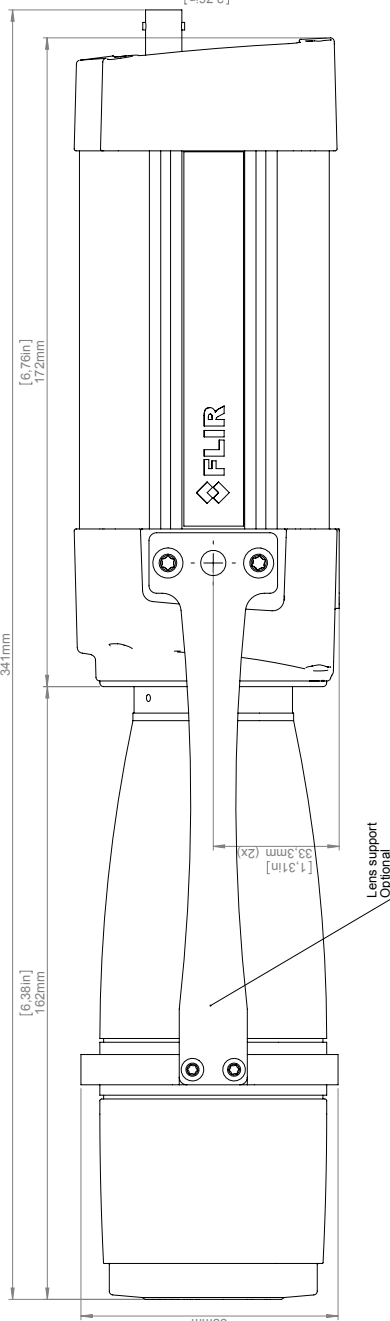
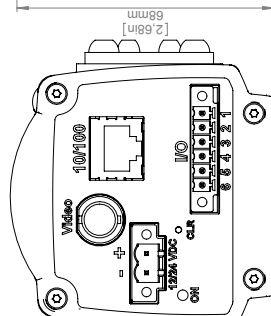
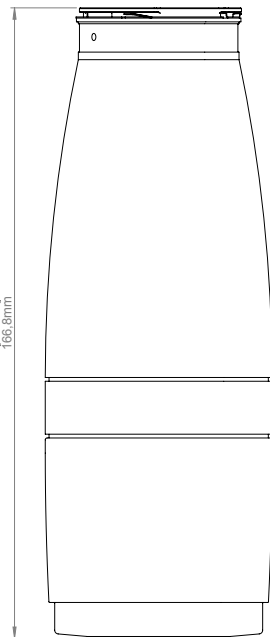
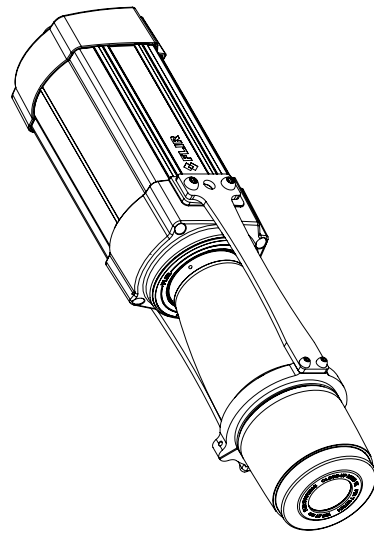
FIELD

Denomination	Size	A3
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Basic dimensions FLIR A3xx/SC3xx

	Drawing No.	T125002	Size	A
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For additional dimensions see page 1



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

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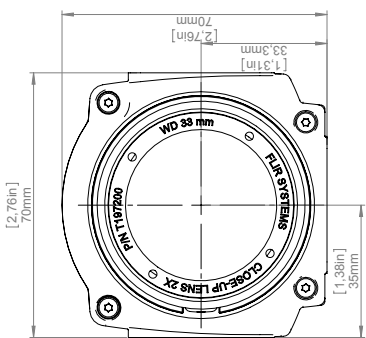
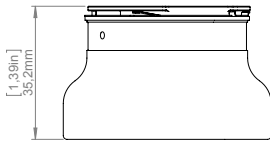
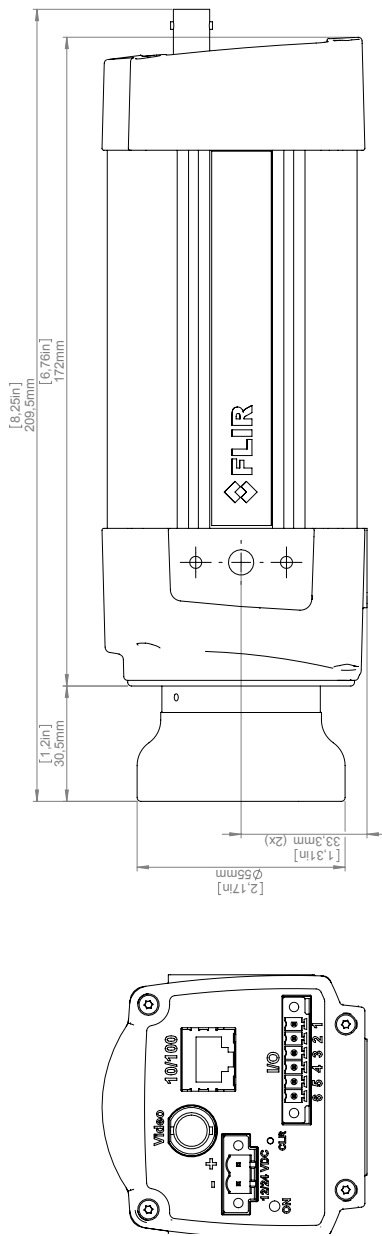
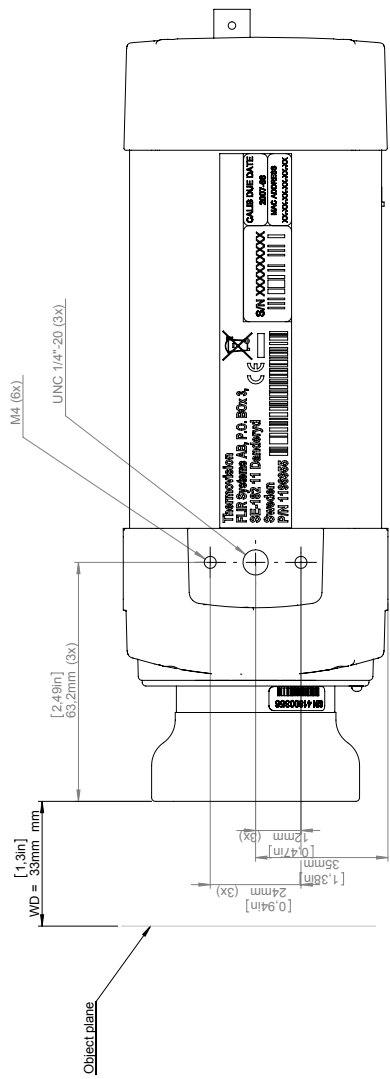
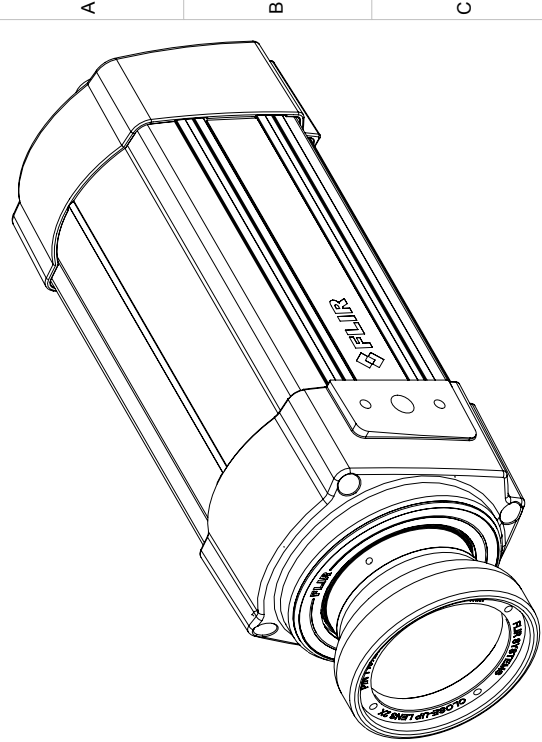
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Camera with Close-up lens 2X (50 µm)

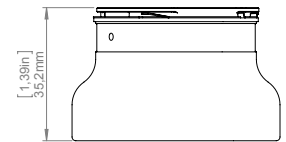
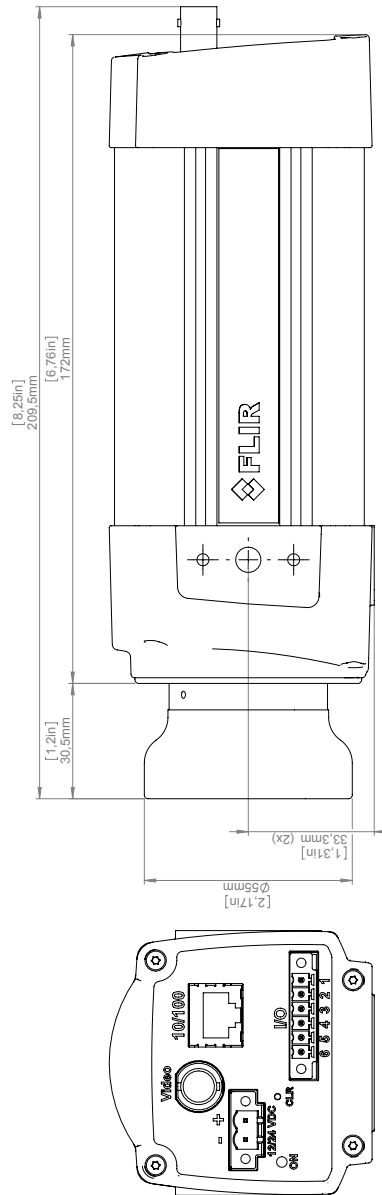
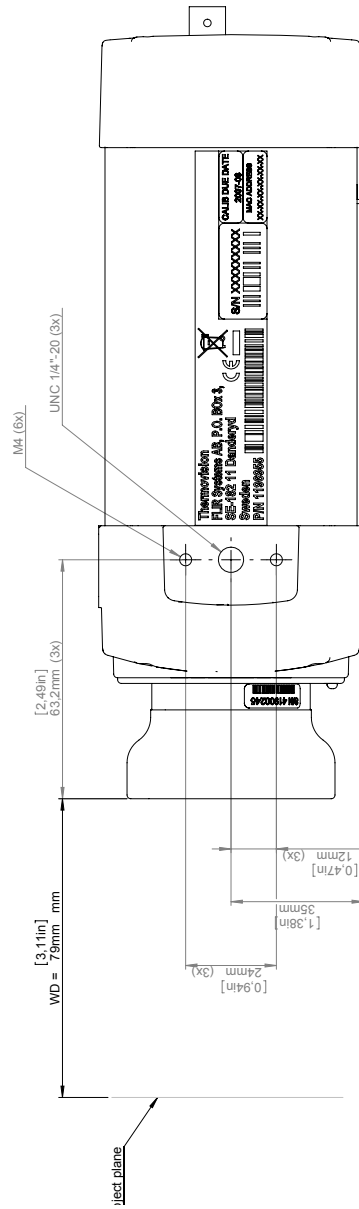
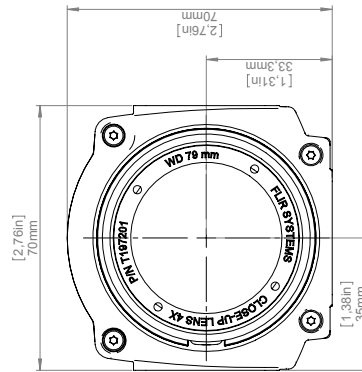
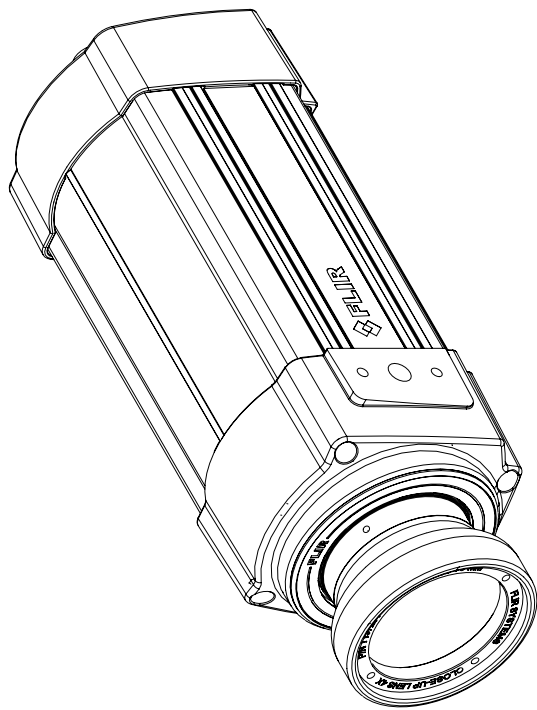


For additional dimensions see page 1

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

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2012-04-18	CAHA	R&D Thermography

Denomination	A3	Scale	1:1	Sheet 8(8)
Basic dimensions FLIR A3xx/SC3xx				
-		Drawing No.	T125002	Scale A

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

