

P/N: 73309-0102

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Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

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General description	
<p>The FLIR A35 has features and functions that make it the natural choice for anyone who uses PC software to solve problems and for whom 320 × 256 pixel resolution is sufficient.</p> <p>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.</p>	
<p>Key features:</p> <ul style="list-style-type: none"> • Very affordable. • Compact (40 mm × 43 mm × 106 mm). • GigE Vision and GenICam compliant. • GigE Vision lockable connector. • PoE (power over Ethernet). • 8-bit 320 × 256 pixel images streamed at 60 Hz, signal linear. • 14-bit 320 × 256 pixel images streamed at 60 Hz, signal and temperature linear. • High frame rates (60 Hz). • Synchronization between cameras possible. • 1x+1x GPIO. • Compliant with any software that supports GenICam, including National Instruments IMAQ Vision, Stammers Common Vision Blox, and COGNEX Vision Pro. 	
<p>Typical applications:</p> <ul style="list-style-type: none"> • Automation and thermal machine vision. • Entry level "high-speed" R&D. 	

Imaging and optical data	
IR resolution	320 × 256 pixels
Thermal sensitivity/NETD	< 0.05°C @ +30°C (+86°F) / 50 mK
Field of view (FOV)	48° × 39°
Minimum focus distance	3.2 cm (1.6 in.)
Focal length	9 mm (0.35 in.)
Spatial resolution (IFOV)	2.78 mrad
F-number	1.25
Image frequency	60 Hz
Focus	Fixed

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Detector data	
Detector type	Focal plane array (FPA), uncooled VOX 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"> –25 to +135°C (–13 to 275°F) –40 to +550°C (–40 to +1022°F)
Accuracy	±5°C (±9°F) or ±5% 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 0.5 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	GigE Vision ver. 1.2 Client API GenICam compliant
Ethernet, image streaming	8-bit monochrome @ 60 Hz <ul style="list-style-type: none"> • Signal linear/ DDE • Automatic/ Manual • Flip H&V 14-bit 320 × 256 pixels @ 60 Hz <ul style="list-style-type: none"> • Signal linear/ DDE • Temperature linear GigE Vision and GenICam compatible
Ethernet, power	Power over Ethernet, PoE IEEE 802.3af class 0 Power
Ethernet, protocols	TCP, UDP, ICMP, IGMP, DHCP, GigEVision
Digital input/output	
Digital input, purpose	General purpose
Digital input	1× opto-isolated, “0” <1.2 VDC, “1” = 2–25 VDC.
Digital output, purpose	General purpose output to ext. device (programmatically set)

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Digital input/output	
Digital output	1× opto-isolated, 2–40 VDC, max. 185 mA
Digital I/O, isolation voltage	500 VRMS
Digital I/O, supply voltage	2–40 VDC, max. 200 mA
Digital I/O, connector type	12-pole M12 connector (shared with Digital synchronization and External power)
Synchronization in, purpose	Frame synchronization in to control camera
Synchronization in	1×, non-isolated
Synchronization in, type	LVC Buffer @3.3V, "0" <0.8 V, "1">2.0 V.
Synchronization out, purpose	Frame synchronization out to control another FLIR Ax5 camera
Synchronization out	1×, non-isolated
Synchronization out, type	LVC Buffer @ 3.3V, "0"=24 MA max, "1"= -24 mA max.
Digital synchronization, connector type	12-pole M12 connector (shared with Digital I/O and External power)
Power system	
External power operation	12/24 VDC, < 3.5 W nominal < 6.0 W absolute max.
External power, connector type	12-pole M12 connector (shared with Digital I/O and Digital Synchronization)
Voltage	Allowed range 10–30 VDC
Environmental data	
Operating temperature range	-15°C to +50°C (+5°F to +122°F)
	<div style="border: 1px solid black; padding: 5px;"> <p> NOTE</p> <p>The operating temperature range assumes that the camera is mounted on the base support (included in the package) or a similar type of heatsink.</p> </div>
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 40 (IEC 60529) with base support mounted
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Physical data	
Weight	0.200 kg (0.44 lb.)
Camera size (L × W × H)	106 × 40 × 43 mm (4.2 × 1.6 × 1.7 in.)
Tripod mounting	1 × UNC ¼"-20 (with Base support accessory, included in the delivery box)

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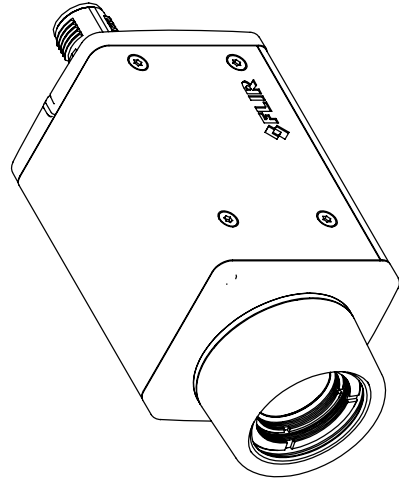
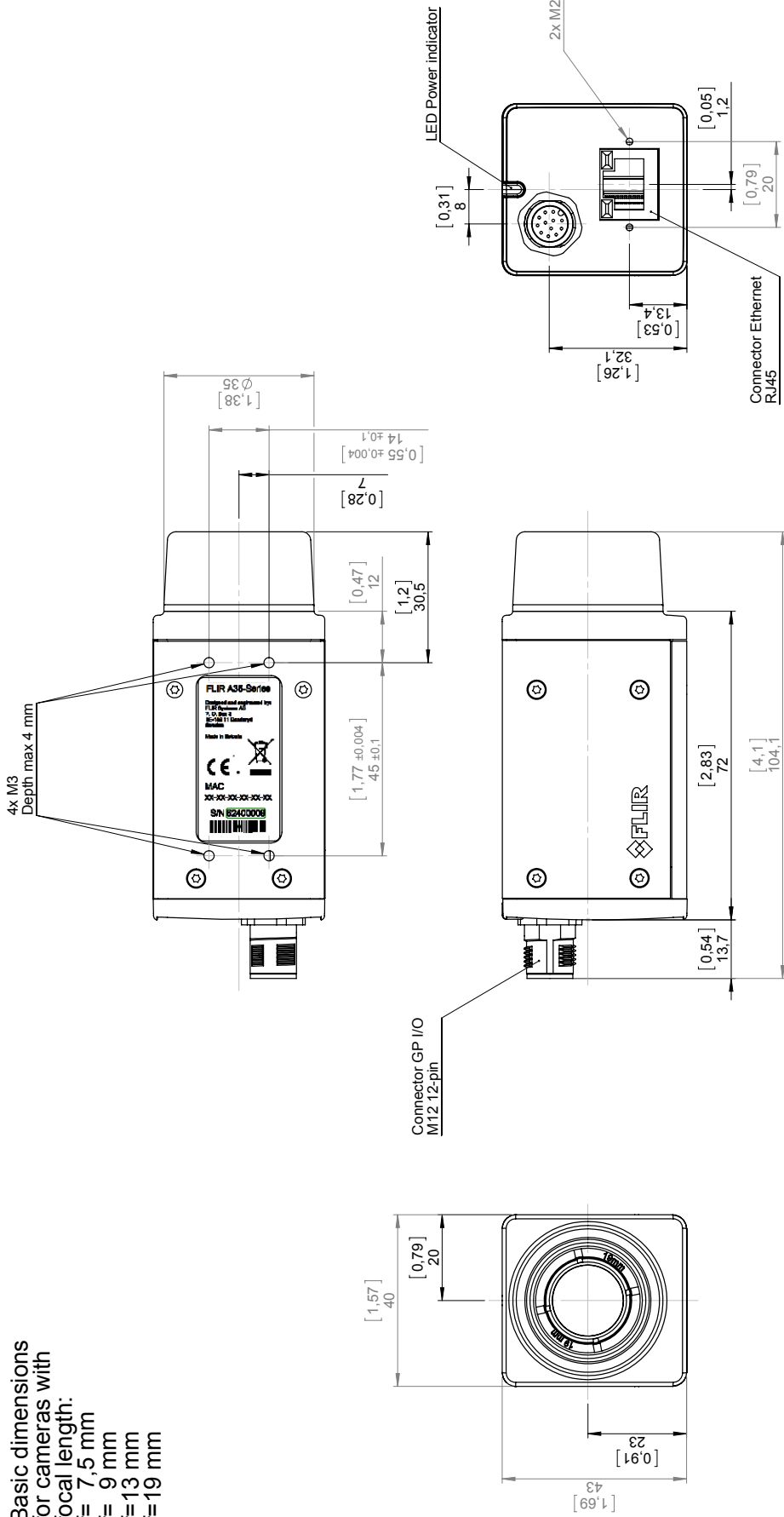
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Physical data	
Base mounting	4 × M3 thread mounting holes (bottom)
Housing material	Magnesium and aluminum
Shipping information	
Packaging, type	Cardboard box
List of contents	<ul style="list-style-type: none"> • Hard transport case • Infrared camera with lens • Base support • Cable tie (2 ea.) • Ethernet cable CAT-6, 2m/6.6 ft (2 ea.) • FLIR ResearchIR Standard 4 • Focus adjustment tool • Gooseneck • Mains cable kit (UK,EU,US) • PoE Injector (power over Ethernet) • Printed documentation • Table stand
Packaging, weight	
Packaging, size	370 × 180 × 320 mm (14.6 × 7.1 × 12.6 in.)
EAN-13	7332558010570
UPC-12	845188011246
Country of origin	Sweden

Supplies & accessories:

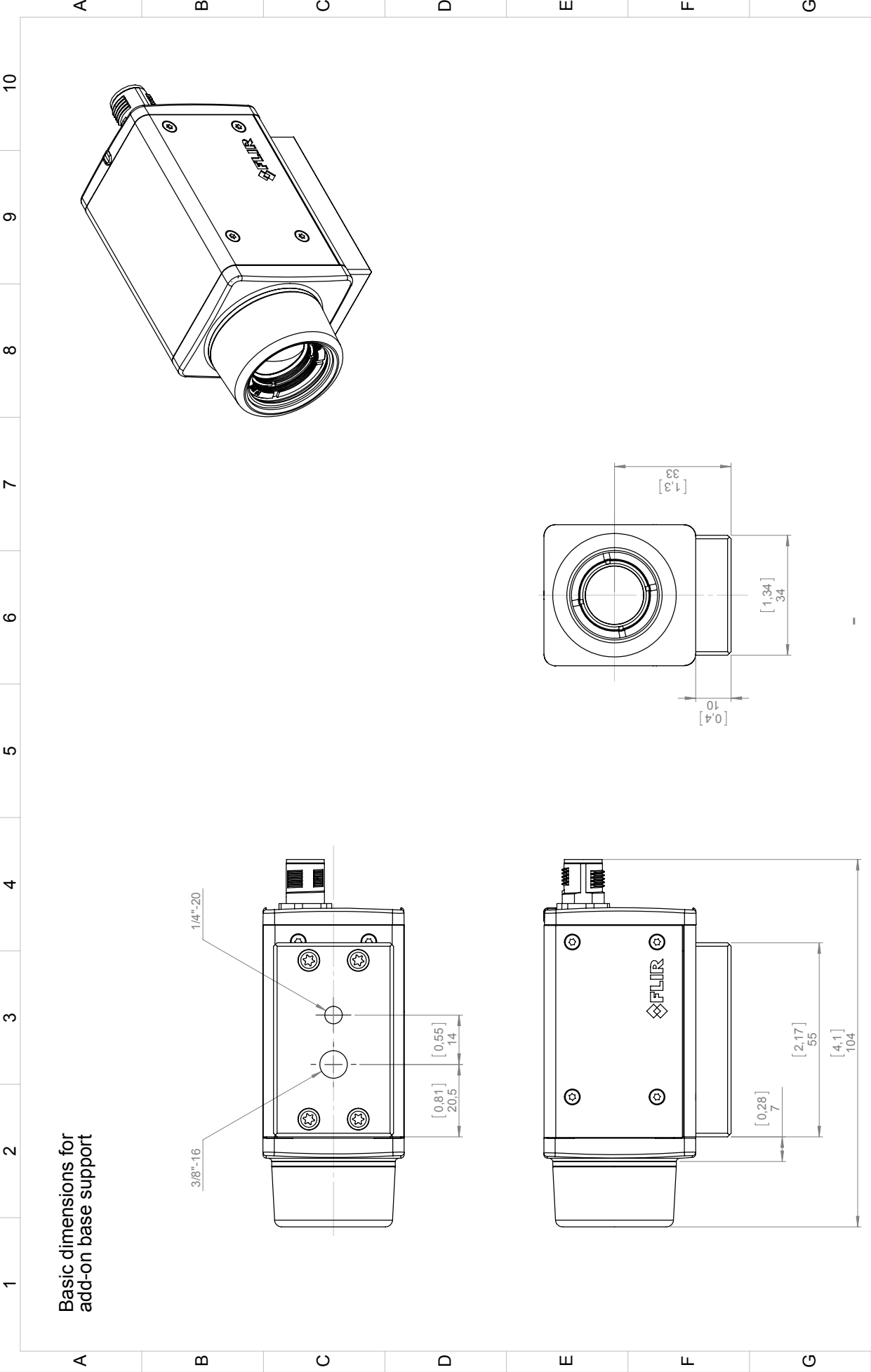
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T198349; Base support
- T198348; Cable kit Mains (UK,EU,US)
- T127605ACC; Cable M12 Pigtail
- T127606ACC; Cable M12 Sync
- T199356; FLIR Ax5 accessory starter kit
- T911183; Gigabit PoE injector 16 W, with multi-plugs
- T198392; Table stand kit
- T198594ACC; Transport case Ax5
- T198584; FLIR Tools
- T198583; FLIR Tools+ (download card incl. license key)
- T300083; FLIR Thermal Studio (incl. license key/QR code)
- 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-0135; Extended Warranty 1 Year for A35, A65
- INST-EWGM-0135; Premium Service Package for A35, A65, E53, E75, E85, E95
- INST-GM-0125; General Maintenance Package for A35, A65, Exx, Kxx

Basic dimensions
for cameras with
focal length:
f= 7,5 mm
f= 9 mm
f=13 mm
f=19 mm



FLIR		Blatt/Sheet 1(7)		Size A3		Rev A	
Konstr/Drawing P. MARCUS		Kontroll/Check MABR	Material -		Ytterbehandling/Surface treatment		
Ändrad av/Modified by P. MARCUS		Datum/Date 2014-01-29		Ytämne/Roughness Ra		Skala/Scale 1:1	
Ändrad av/Modified by P. MARCUS		Datum/Date 2014-02-11		Ytämne/Roughness Ra		ArtNo. T128116	
Där ej annat anges/Unless otherwise stated Genom ISO 2768-mK Utmått utöver/Except from ISO 2768-m		Benämning/Denomination Basic dimensions AX5		Ytämne/Roughness Ra		Ritning/Drawing No T128116	
0.5-6 0.5-120 0.5-320 1.20-400 4.00-1000		Hållsläddradier ±0.1 ±0.2 ±0.3 ±0.5 ±0.8		Fillet radii Kantströmma Edges broken			

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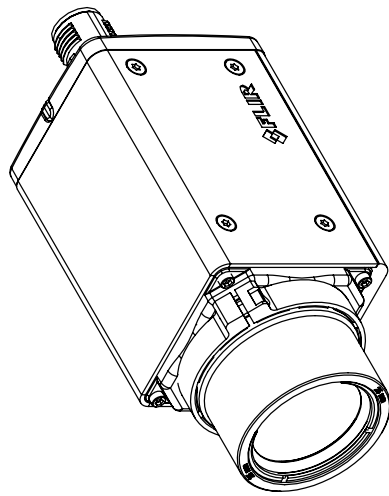
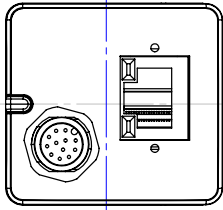
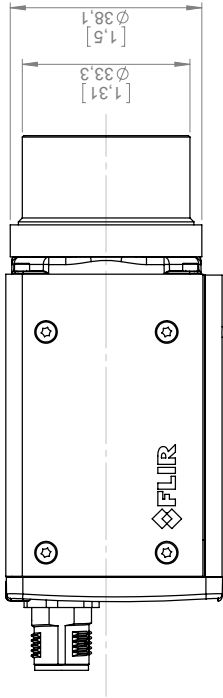
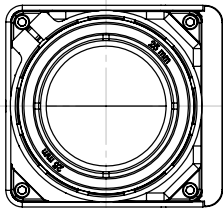
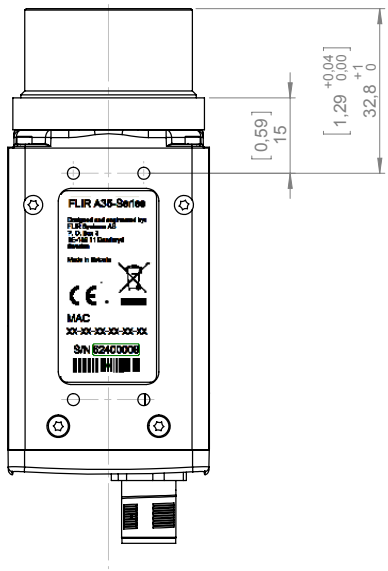


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Konstruktör/Drawn P. MARCUS		Ändrad av/Modified by P. MARCUS		Ytjämnhet/Roughness Ra		Ytbehandling/Surface treatment	
Användningsområde/Use ISO 2768-mK		Benämning/Denomination Basic dimensions Ax5		Skala/Scale 1:1		Bladd/Sheet 2(7)	
Ditt ej annat anges/Unless otherwise stated UNTRAG ur/Except from ISO 2768-m		Material A3		Riktning/Direction T128116		Rev A	
0.50 Hålsläppligt (30)-120 Fillet radi (20)-400 Kanter brutna (40)-1600 2x3 Edges broken		f=7,5 mm to f=100 mm		Aritm.		Riktning/Direction T128116	

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Basic dimensions:
 Camera with focal length
 f=25 mm IR lens.
 Only dimensions valid for
 this IR lens.
 For all other dimensions see pages
 1 and 2.



Konstr/Drawn	P. MARCUS	Datum/Date	2014-01-29	Kontroll/Check	MABR	Material	-
Ändrad av/Modified by	P. MARCUS	Ändrad/Modified	2014-02-11	Ytjämnhet/Roughness	Ra	Y-behandling/Surface treatment	
Dir. ej annat angavs/Unless otherwise stated	Gen. tol. ISO 2768-mK	Benämning/Denomination					
Utvärta ut/Except from ISO 2768-m	0.50						
0.50	40.1						
(30)-120	40.3						
(40)-100	40.5						
(40)-100	40.6						
	40.8						
	40.9						
	41.0						
	41.1						
	41.2						
	41.3						
	41.4						
	41.5						
	41.6						
	41.7						
	41.8						
	41.9						
	42.0						
	42.1						
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	49.9						
	50.0						

Basic dimensions Ax5
 f=7,5 mm to f=100 mm

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Blad/Sheet Size 3(7)

Scale/Scale 1:1

ATNo.

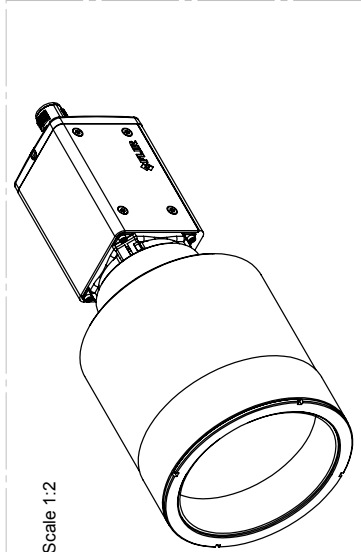
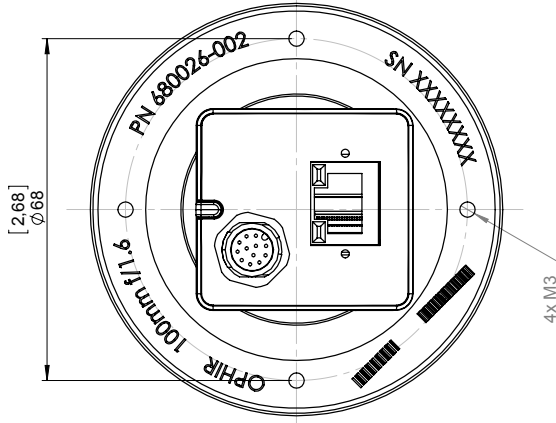
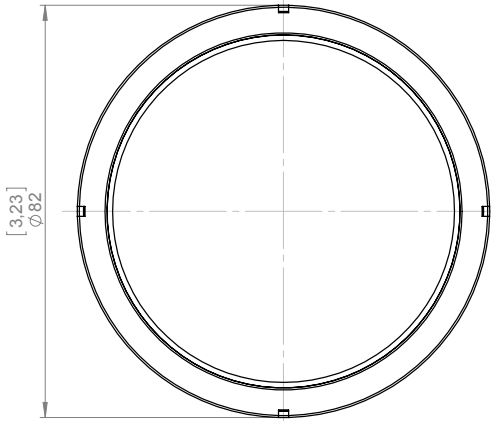
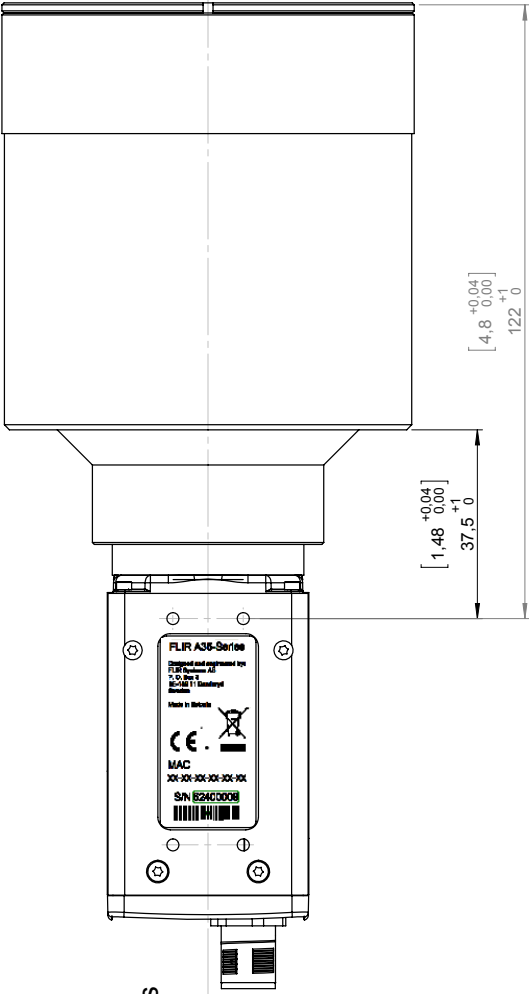
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Rev A

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Basic dimensions:
 Camera with focal length
 f=100 mm IR lens.
 Only dimensions valid for
 this IR lens.
 For all other dimensions see pages
 1 and 2.



Scale 1:2



Konstruktør P. MARCUS	Datum/Date 2014-01-29	Kontroll/Check MABR	Materiale -
Åndret av/Modified by P. MARCUS	Åndret/Modified 2014-02-11	Ytjerner/Roughness Ra	Ybehandling/Surface treatment
Dir. ei annet angis/Unless otherwise stated Unntak unntak fra ISO 2768-m	Benømming/Denomination	Basic dimensions Ax5 f=7,5 mm to f=100 mm	
0,5-30 (30)-120 (120)-400 (400)-1600	40,1 40,3 40,5 40,8	Hålslutteder Flerl. radi	Blad/Sheet 7(7)
		Kantene brutna Edges broken	Size A3
			Rev T128116
			Rev A



The World's Sixth Sense™

May 25, 2018 Täby, Sweden

AQ320295

CE Declaration of Conformity – EU Declaration of Conformity

Product: FLIR Ax5 -series

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 Ax5 -series.

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Directives:

Directive:	2011/65/EU	RoHS
Directive	2014/30/EU	Electromagnetic Compability

Standards:

Emission:	EN 61000-6-3:2007	EMC Emission residential, commercial, light-industrial
Immunity:	EN 61000-6-2:2005	EMC Immunity for industrial environments

FLIR Systems AB
Quality Assurance

Lea Dabiri
Quality Manager