

P/N: 62625-0101

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Corporate Headquarters

FLIR Systems, Inc.

27700 SW Parkway Ave.

Wilsonville, OR 97070

USA

Telephone: +1-503-498-3547

Website

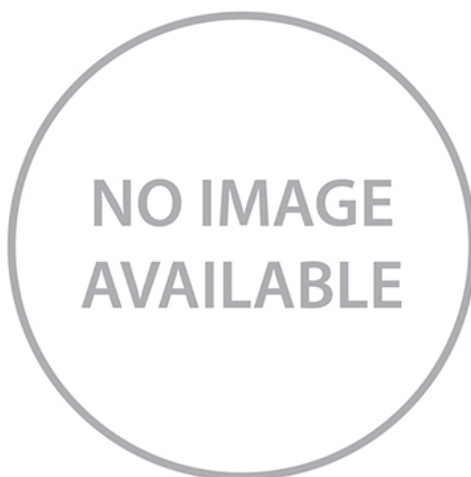
<http://www.flir.com>

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 A65 camera has features and functions that make it the natural choice for anyone who uses PC software to solve problems and for whom 640 × 512 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:

- Very affordable
- Compact (40 × 43 × 106 mm)
- GigE Vision and GenICam compliant
- GigE Vision lockable connector
- PoE (power over Ethernet)
- 8-bit 640 × 512 images streamed at 30 Hz, signal linear
- 14-bit 640 × 512 images streamed at 30 Hz, signal- and temperature linear
- Synchronization between cameras possible
- 1x+1x GPIO
- Compliant with any software that supports GenICam, including National Instruments IMAQ Vision, Stemmers Common Vision Blox, and COGNEX Vision Pro

Typical applications:

- Automation, thermal machine vision
- Entry level "high speed" R&D

Imaging and optical data

IR resolution	640 × 512 pixels
Thermal sensitivity/NETD	< 0.05°C @ +30°C (+86°F) / 50 mK
Field of view (FOV)	25° × 20°
Focal length	25 mm (0.98 in.)
Spatial resolution (IFOV)	0.68 mrad
F-number	1.25
Image frequency	30 Hz
Focus	Fixed

Detector data

Detector type	Focal Plane Array (FPA), Uncooled VOX microbolometer
Spectral range	7.5–13 μm

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Detector data	
Detector pitch	17 µm
Detector time constant	Typical 12 ms
Measurement	
Object temperature range	–25 to +135°C (–13 to 275°F)
Accuracy	±5°C (±9°F) or ±5% of reading
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 @ 30 Hz - Signal linear/ DDE - Automatic/ Manual - Flip H&V 14-bit 640 × 512 pixels @ 30 Hz - 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" <2, "1"=2-12 VDC. NOTE: Maximum input 12 VDC. If the input is above 12 VDC without a resistor in series there is a risk of damaging the input. If the input is 24 VDC use a 1.2 kΩ resistor in series. In that case "1" = 3-24 VDC.
Digital output, purpose	General purpose Output to ext. device (programmatically set)
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)
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

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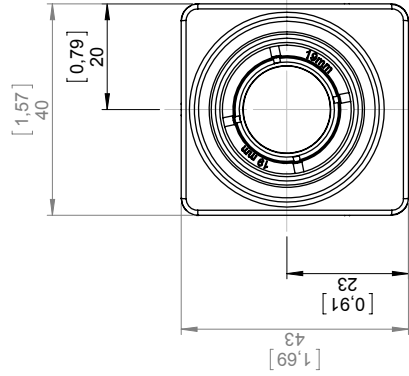
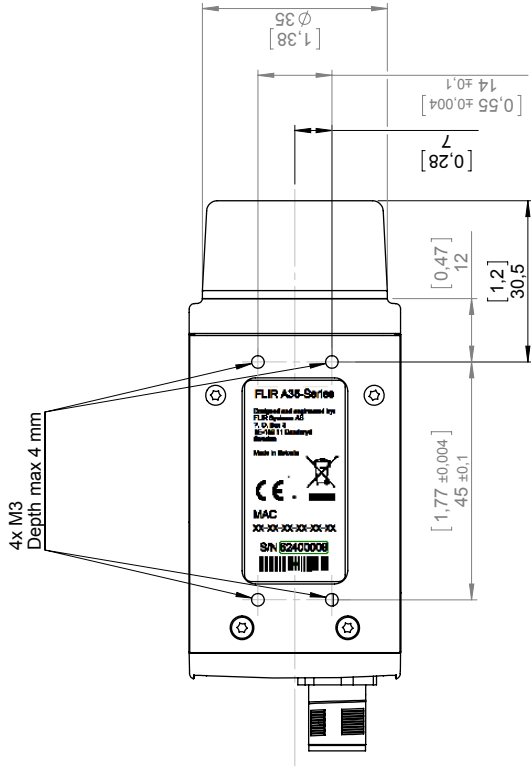
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Environmental data	
Operating temperature range	–15°C to +50°C (+5°F to +122°F)
Storage temperature range	–40°C to +70°C (–40°F to +158°F)
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F)
EMC	• EN 61000-6-2 (Immunity) • EN 61000-6-3 (Emission) • FCC 47 CFR Part 15 Class B (Emission)
Encapsulation	IP 40 (IEC 60529) with base support mounted
Bump	25 g (IEC 60068-2-29)
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	UNC ¼"-20 (on three sides)
Base mounting	4 × M3 thread mounting holes (bottom)
Housing material	Magnesium and aluminum
Shipping information	
• Infrared camera with lens • Cardboard box • FLIR Tools download card • Printed documentation • User documentation CD-ROM	

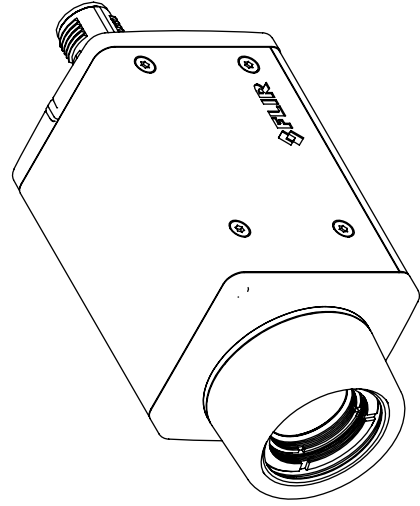
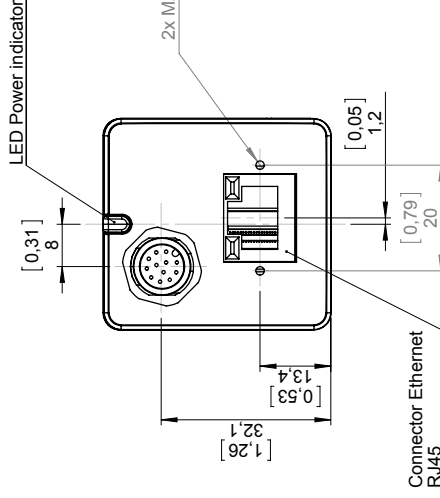
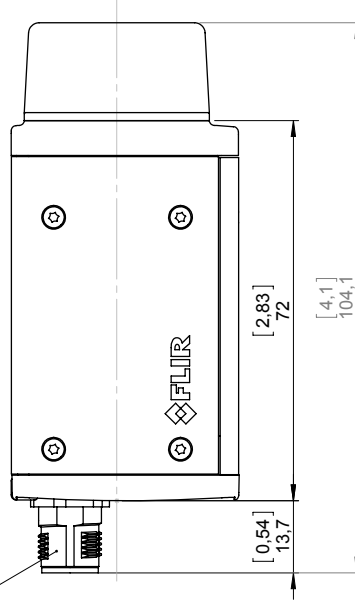
Supplies & accessories:

- T951004ACC; Ethernet cable CAT-6, 2m/6.6 ft.
- T198349; Base support
- T198348; Cable kit Mains (UK,EU,US)
- T911112; PoE injector
- T198392; Table stand kit
- T911183; Gigabit PoE injector 16 W, with multi-plugs
- T127605ACC; Cable M12 Pigtail
- T127606ACC; Cable M12 Sync
- T198584; FLIR Tools
- T198583; FLIR Tools+ (license only)
- DSW-10000; FLIR IR Camera Player

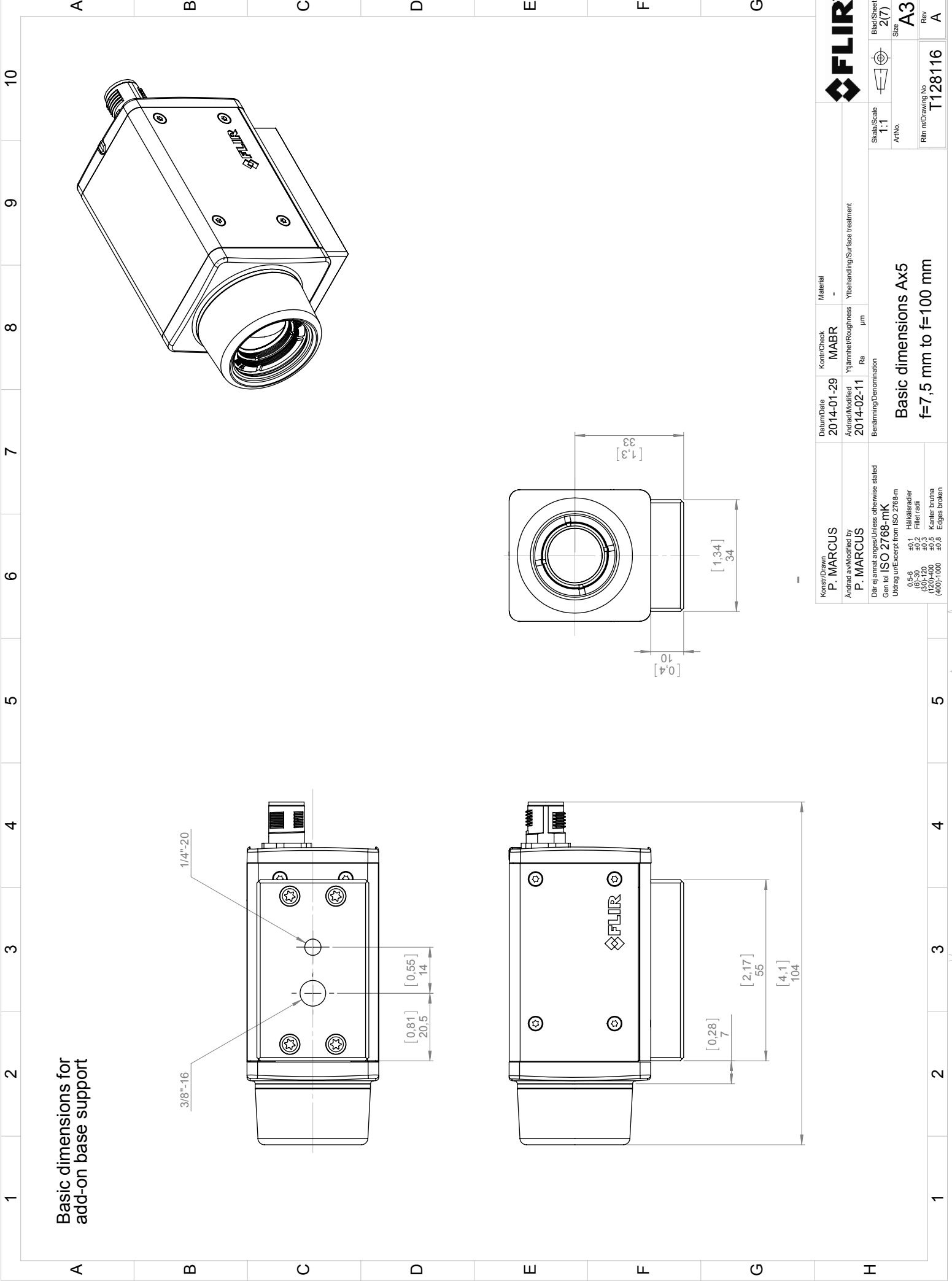
Basic dimensions
for cameras with
focal length:
f= 7,5 mm
f= 9 mm
f=13 mm
f=19 mm



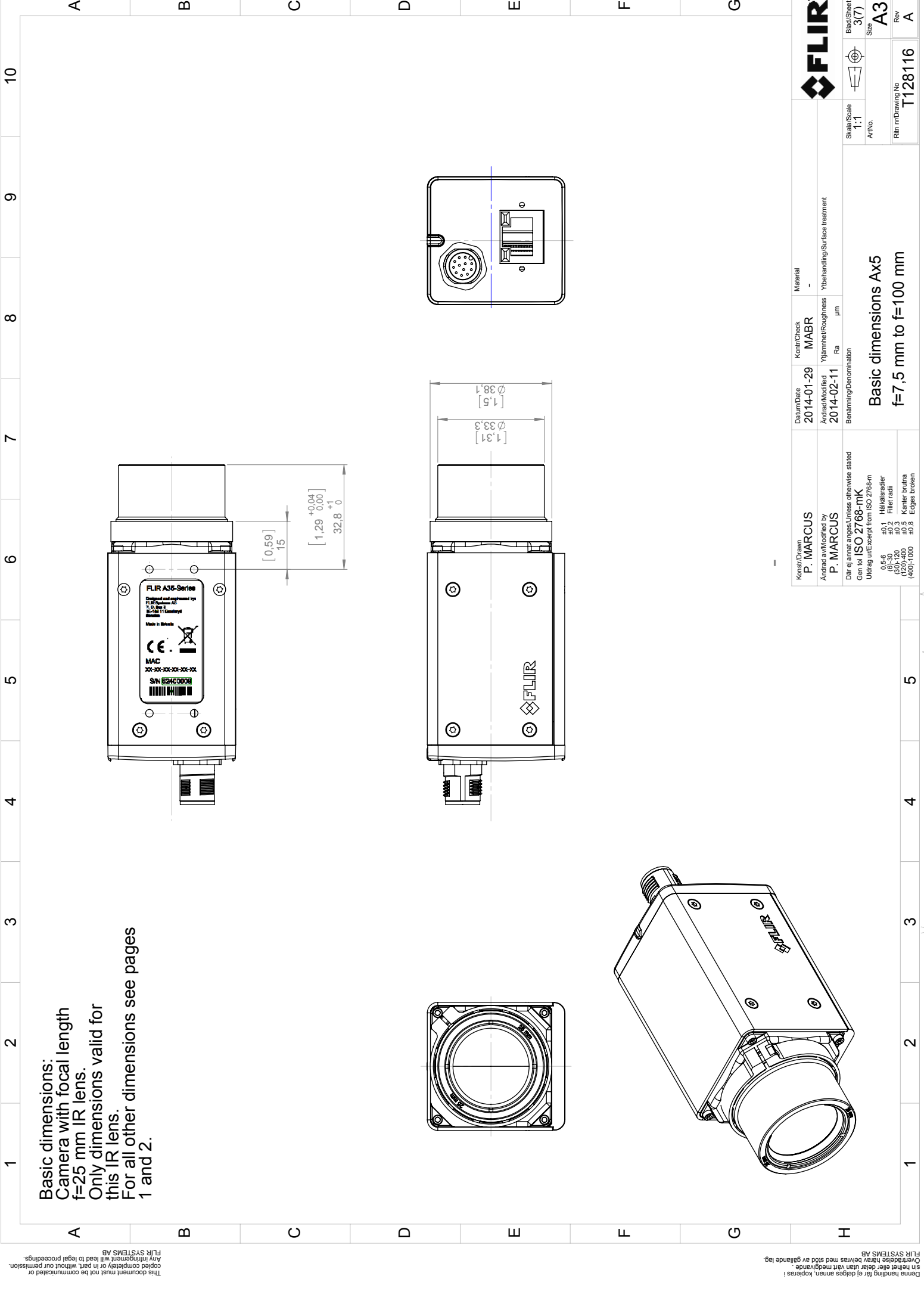
Connector GP I/O
M12 12-pin



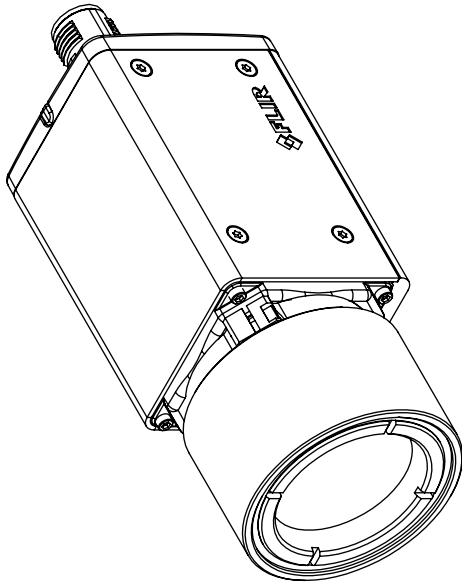
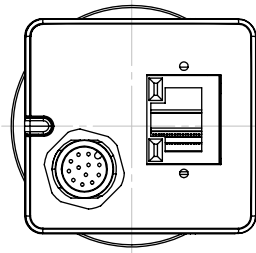
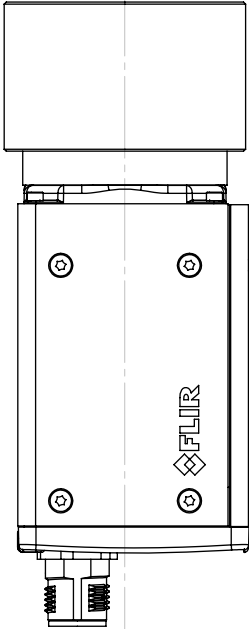
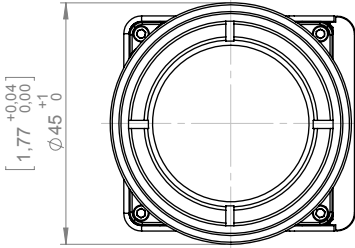
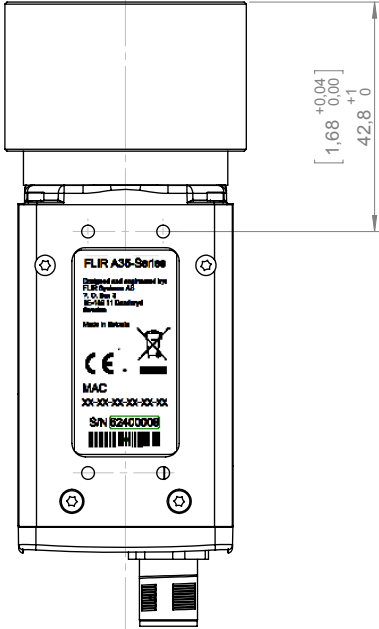
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Ändrad/Modified by P. MARCUS	Ändrad/Modified 2014-02-11	Yttermhet/Roughness Ra	Ytbehandling/Surface treatment
Benämning/Denomination Basic dimensions Ax5 f=7,5 mm to f=100 mm			
Där ej annat anges/Unless otherwise stated Gen. tol. ISO 2768-mK Utmär. utt.except from ISO 2768-m			
0,5-6 ±0,1 Hållradier (6)-30 ±0,2 Fillet radii (120)-400 ±0,5 Kanter brutna (400)-1000 ±0,8 Edges broken			
Skala/Scale 1:1	ÄrtNb. 1(7)	Rev A	Ritn nr/Drawing No. T128116



FLIR		Konstr/Drawn P. MARCUS		Datum/Date 2014-01-29	Kontr/Check MABR	Material -
Ändrad av/Modified by P. MARCUS		Ytjämnhet/Roughness Ra		Ytbehandling/Surface treatment		
Där ej annat anges/Unless otherwise stated		Benämning/Denomination		Skala/Scale 1:1		
Utdrag ur/Excerpt from ISO 2768-mK		Gen tol ISO 2768-mK		Blad/Sheet 2(7)		
0,5-6		±0,1		Size A3		
60-120		±0,2		Rev A		
(120)-400		±0,5		Rtn nr/Drawing No T128116		
(400)-1000		±0,8		Basic dimensions Ax5 f=7,5 mm to f=100 mm		

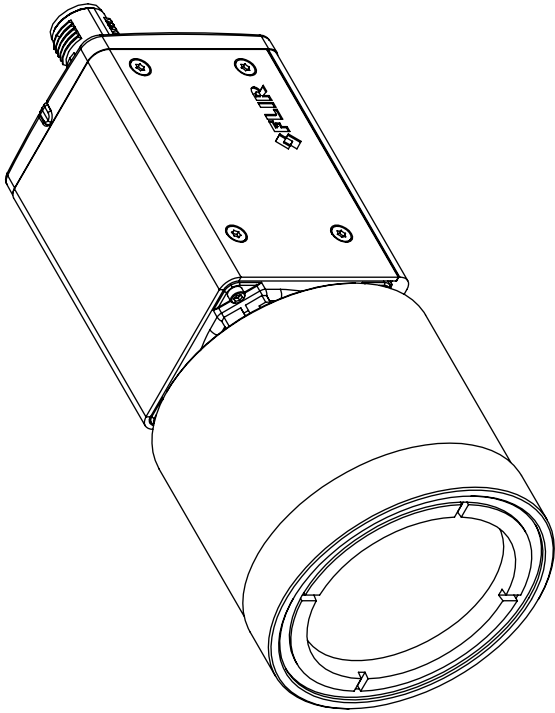
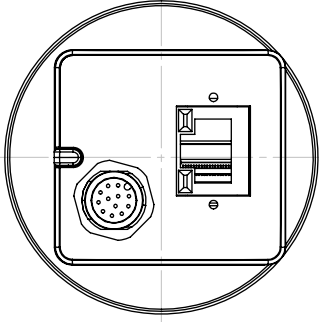
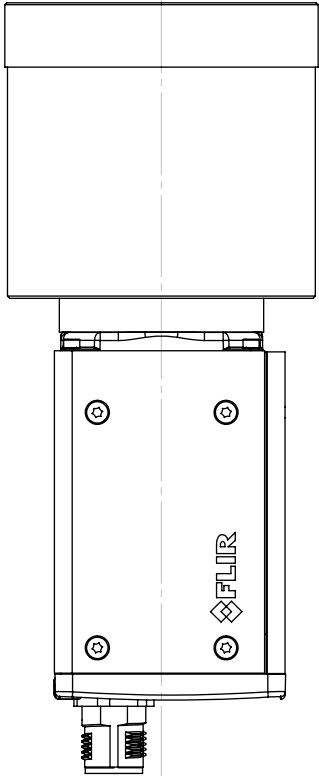
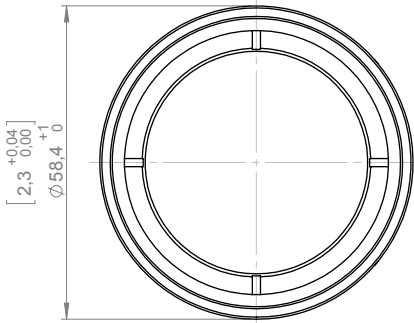
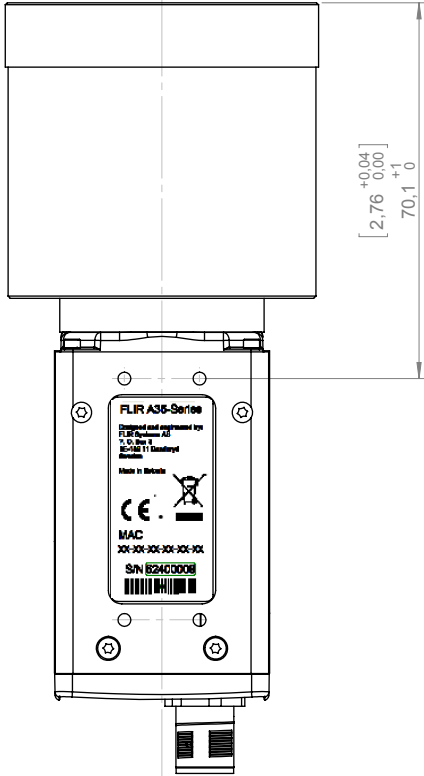


Basic dimensions:
Camera with focal length
f=35 mm IR lens.
Only dimensions valid for
this IR lens.
For all other dimensions see pages
1 and 2.

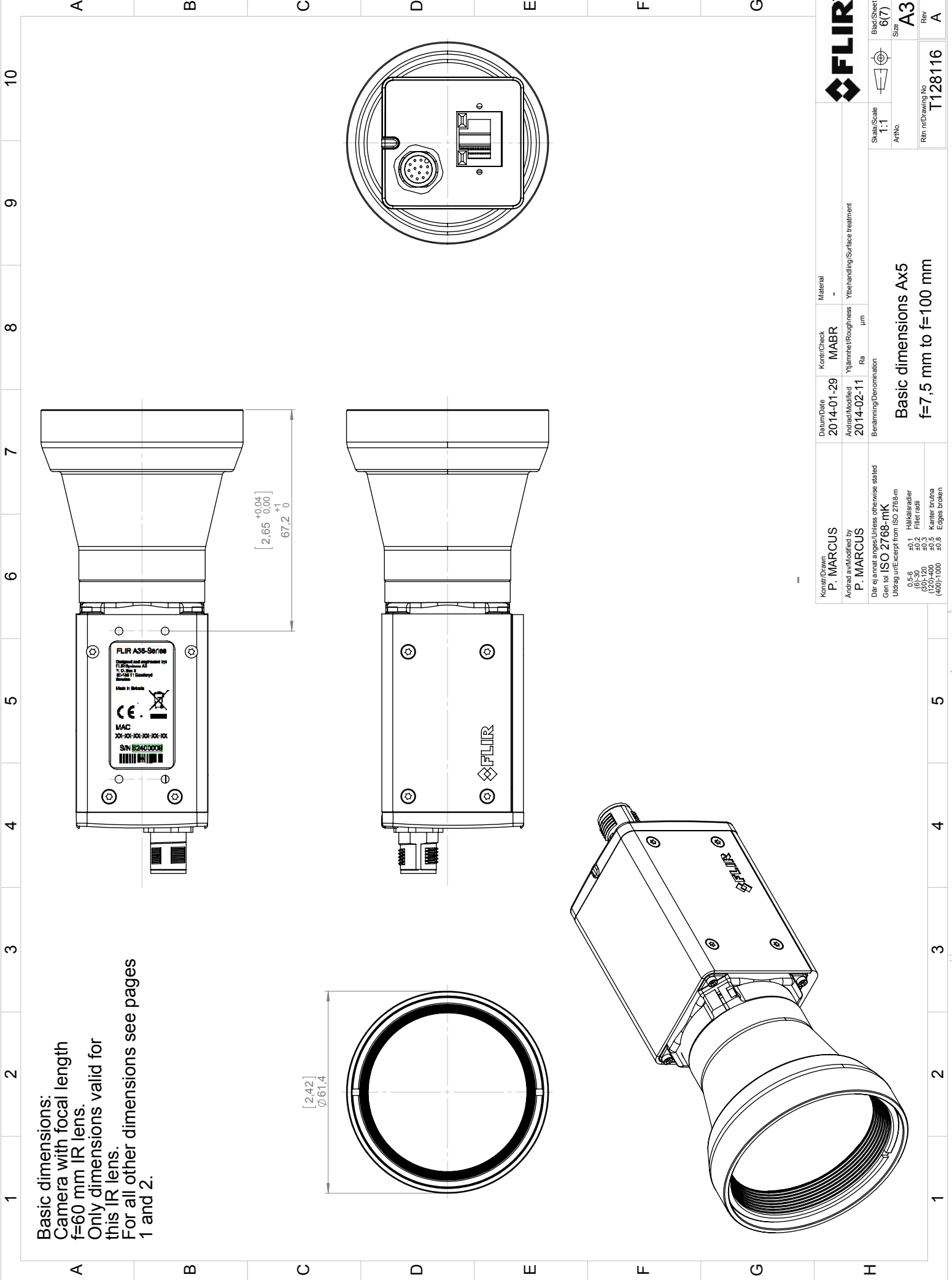


Konstruktör P. MARCUS		Datum 2014-01-29	Kontroll MABR	Material -
Ändrad av/Modificerad P. MARCUS		Ändrad/Modified 2014-02-11	Ytjämnhet/Roughness Ra	Ytbehandling/Surface treatment
Gen för ISO 2768-mK Utdrag ur/Excerpt from ISO 2768-m		Skala/Scale 1:1		
Där ej annat anges/Unless otherwise stated		Art.Nr. T128116		
0,5-6 ±0,1 Hållkvalitet 0,6-3,2 ±0,2 Filler radi (30)-20 ±0,5 Kanter brutna (400)-1000 ±0,8 Edges broken		Blad/Sheet 4(7)		
Basic dimensions Ax5 f=7,5 mm to f=100 mm		Rev A		

Basic dimensions:
Camera with focal length
f=50 mm IR lens.
Only dimensions valid for
this IR lens.
For all other dimensions see pages
1 and 2.



Konstruktör/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	Ytbehandling/Surface treatment
Gen för ISO 2768-mK Utdrag ur/Excerpt from ISO 2768-m		Benämning/Denomination		
0,5-6 60-120 120-400 (400)-1000		Hållfärdighet Hållfärdighet Filer radi Kanter brutna Edges broken		
FLIR		Basic dimensions Ax5 f=7,5 mm to f=100 mm		
FLIR		Skala/Scale 1:1		
FLIR		Blad/Sheet 5(7)		
FLIR		ArtNo.		
FLIR		Rev		
FLIR		T128116		



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Konstr/Drawn P. MARCUS		Datum/Date 2014-01-29	Kontr/Check MABR	Material -
Ändrad av/Modified by P. MARCUS		Ytjämnhet/Roughness Ra	Ytbehandling/Surface treatment	
Där ej annat anges/Unless otherwise stated		Benämning/Denomination		
Gen för ISO 2768-mK				
Utmått ut/Excerpt from ISO 2768-m				
0.5-6		±0.1	Hållsläradler	
6-130		±0.2	Fillet radi	
130-200		±0.3	Kanter brutna	
200-400		±0.5		
400-1000		±0.8	Edges broken	
Basic dimensions Ax5				
f=7,5 mm to f=100 mm				
T128116				
Rev				
A				



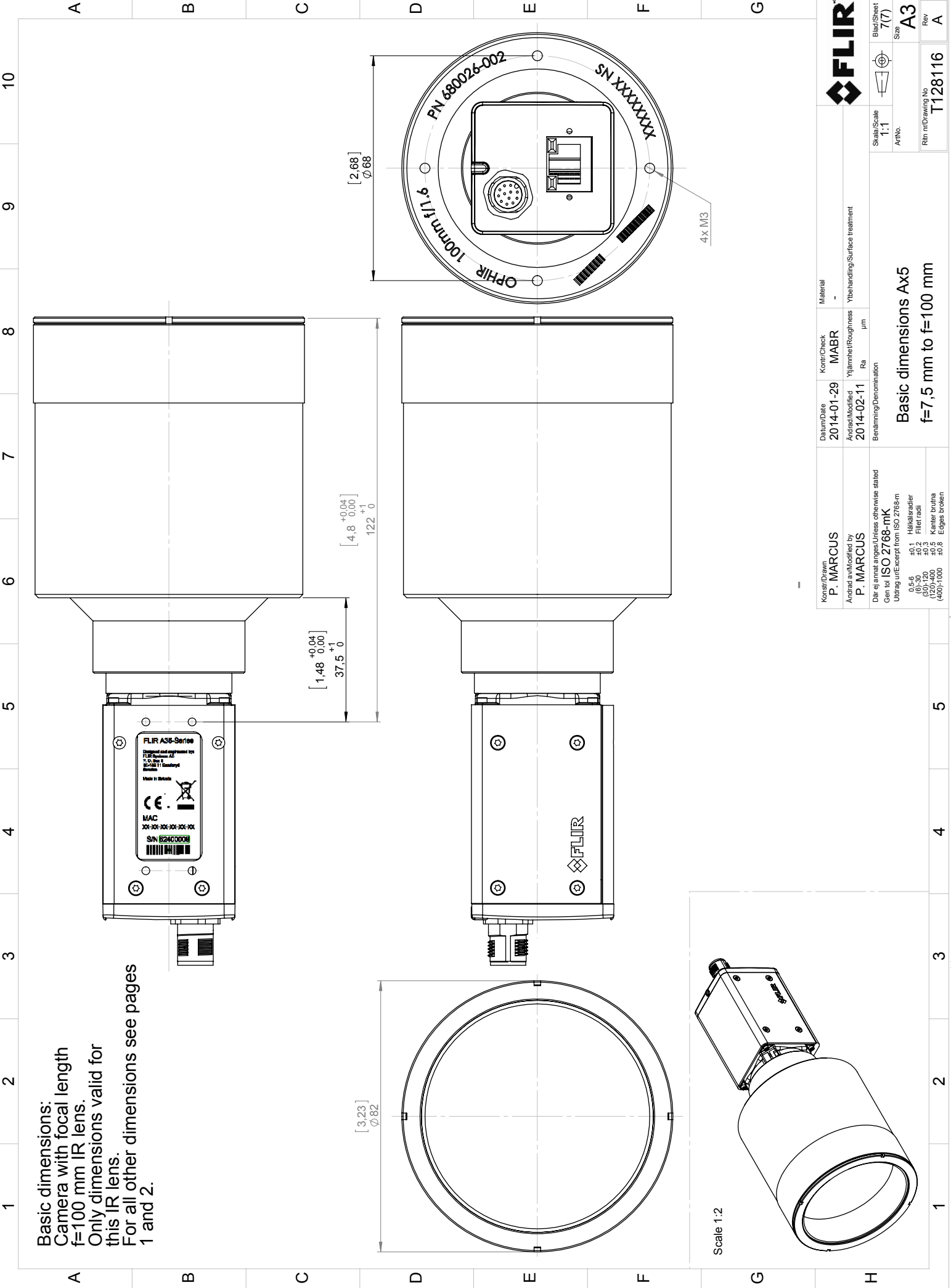
Scale/Scale
1:1

AttNo.

Blad/Sheet
6(7)

Size
A3

Rev
A



FLIR		Blad/Sheet 7(7)		Size A3		Rev A	
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Ändrad av/Modified by P. MARCUS		Ändrad/Modified 2014-02-11		Benämning/Denomination		Basic dimensions Ax5 f=7,5 mm to f=100 mm	
Gen för ISO 2768-mK		Utdrag ur/Excerpt from ISO 2768-m		Dar ej annat anges/Unless otherwise stated			
				0,5-6		Hållsläradier	
				0,1-3,0		Filer radi	
				0,1-3,0		Kanter brutna	
				(120)-400		±0,5	
				(400)-1000		±0,8	
						Edges broken	