

FLIR A65 f=13 mm with SC kit (30 Hz)




General description	
<p>The FLIR A65 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.</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>	
Key features:	
<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 640 × 512 pixel images streamed at 30 Hz, signal linear • 14-bit 640 × 512 pixel 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, Stammers Common Vision Blox, and COGNEX Vision Pro. 	
Typical applications:	
<ul style="list-style-type: none"> • Automation and 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)	45° × 37°
Minimum focus distance	7.6 cm (3.0 in.)
Focal length	13 mm (0.5 in.)
Spatial resolution (IFOV)	1.31 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
Detector pitch	17 μm
Detector time constant	Typical 12 ms

FLIR A65 f=13 mm with SC kit (30 Hz)

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 @ 30 Hz <ul style="list-style-type: none"> Signal linear/ DDE Automatic/ Manual Flip H&V 14-bit 640 × 512 pixels @ 30 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)
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

FLIR A65 f=13 mm with SC kit (30 Hz)

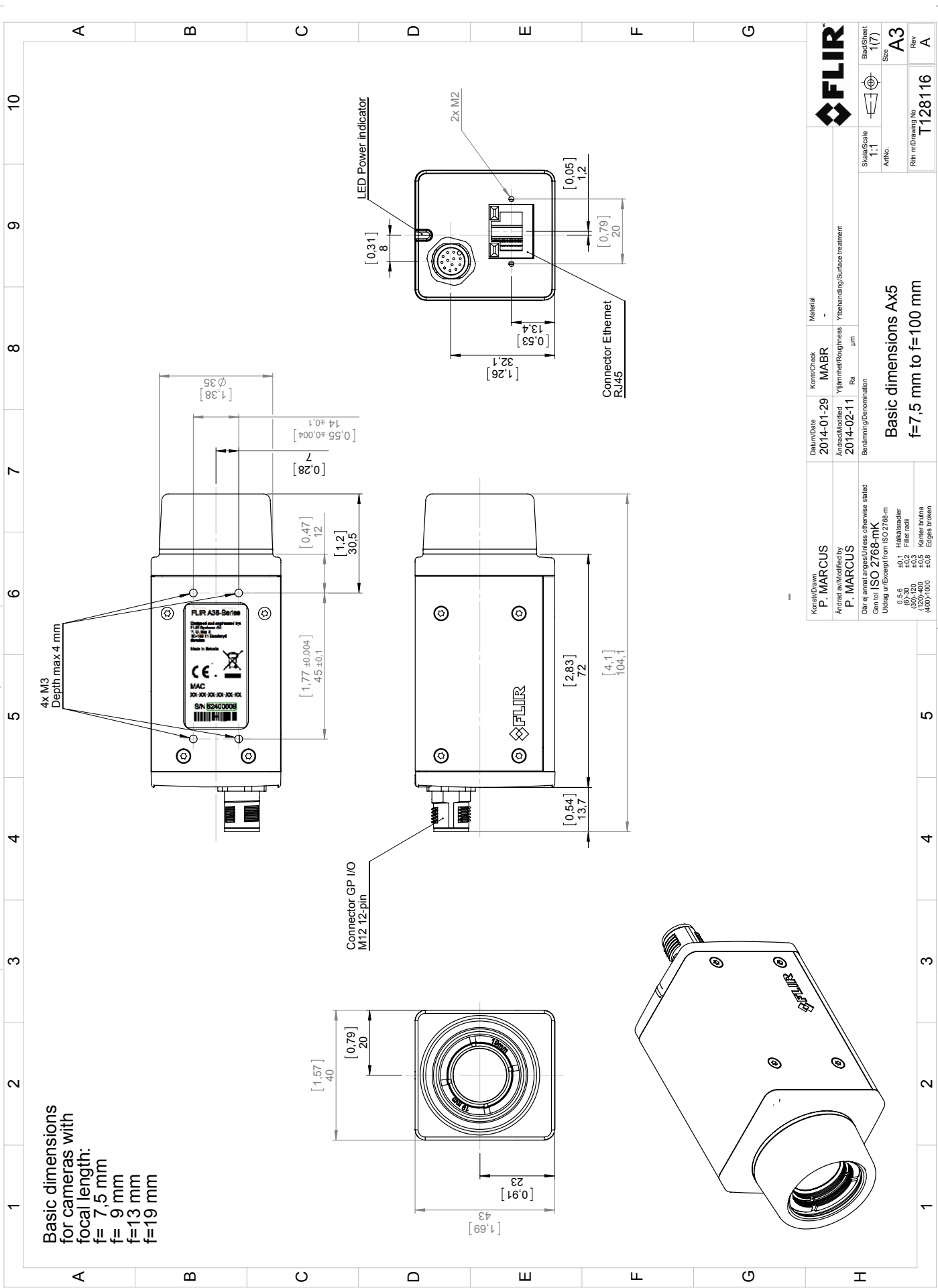
Digital input/output	
Synchronization out	1x, non-isolated
Synchronization out, type	LVC Buffer @ 3.3V, "0"=24 MA max, "1"= -24 mA max.
Digital synchronization, connector type	12-pole M12 connector (shared with Digital I/O and External power)
Power system	
External power operation	12/24 VDC, < 3.5 W 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; margin-top: 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 x W x H)	106 x 40 x 43 mm (4.2 x 1.6 x 1.7 in.)
Tripod mounting	1 x UNC ¼"-20 (with Base support accessory, included in the delivery box)
Base mounting	4 x 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 Research Studio 1-Year Subscription (license only) • Focus adjustment tool • Gooseneck • Mains cable kit (UK,EU,US) • PoE Injector (power over Ethernet) • Printed documentation • Table stand

FLIR A65 f=13 mm with SC kit (30 Hz)

Shipping information	
Packaging, weight	
Packaging, size	295 × 200 × 105 mm (11.6 × 7.9 × 4.1 in.)
EAN-13	7332558011829
UPC-12	845188012915
Country of origin	Estonia

Supplies & accessories:

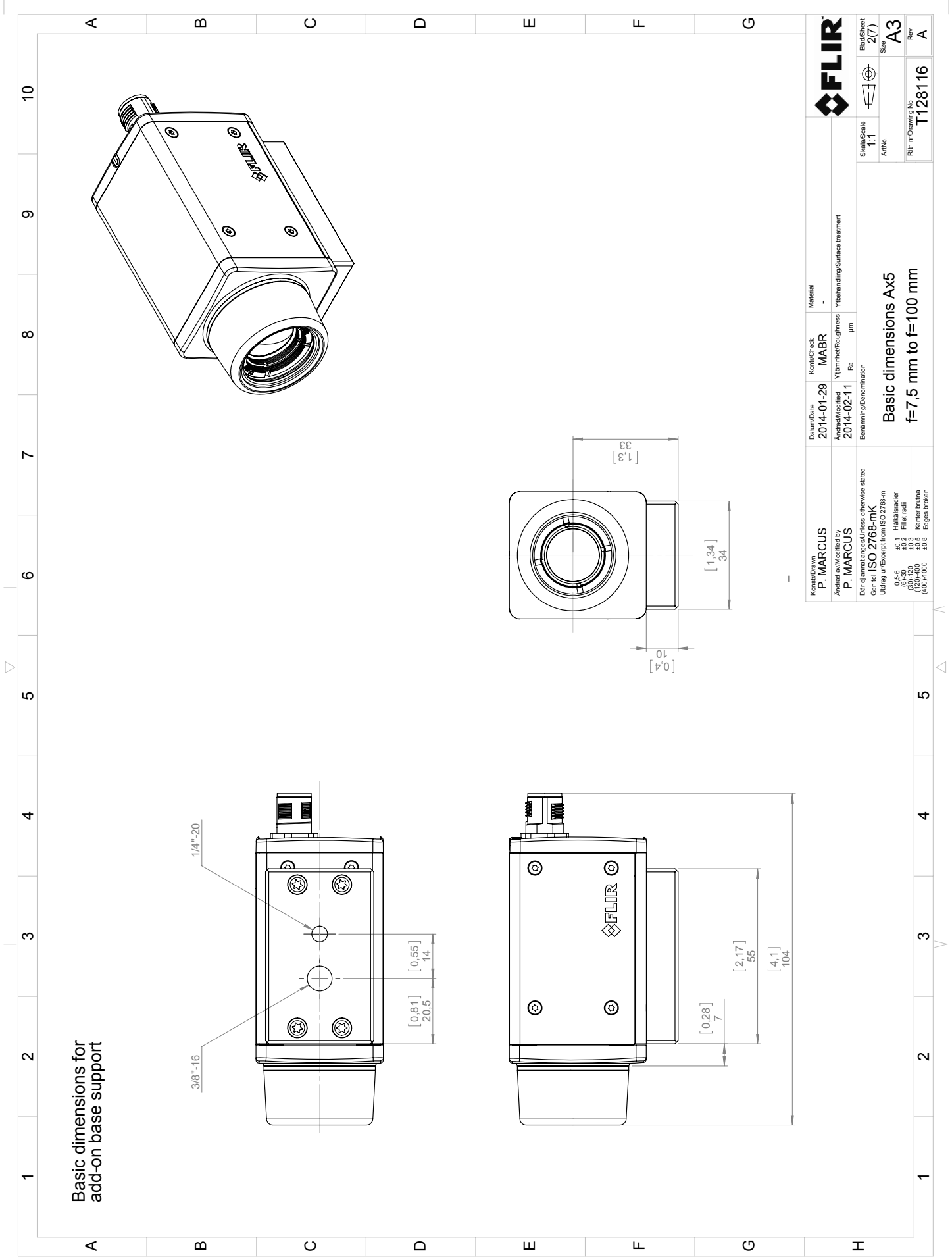
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T198349; Base support
- T198348; Cable kit Mains (UK,EU,US)
- T127605ACC; Cable M12 Pigtail
- T127606ACC; Cable M12 Sync
- T199356; FLIR Ax5 accessory starter kit
- T198342ACC; Focus adjustment tool
- T911183; Gigabit PoE injector 16 W, with multi-plugs
- T198392; Table stand kit
- T198594ACC; Transport case Ax5
- 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-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



FLIR		Blad/Sheet 1(7)	
Konstr/Drawn P. MARCUS		Kontroll/Check MABR	Material -
Datum/Date 2014-01-29		Ytämning/Roughness Ytbehandling/Surface treatment	
Ändrad av/Modified by P. MARCUS		Ra µm	
Där ej annat anges gäller dessa, uteslutningsfria, övrigt ställd Genför ISO 2768-mK		Benämning/Denomination Basic dimensions Ax5 f=7,5 mm to f=100 mm	
Utdrag ur beskrivning från ISO 2768-m		Rit nr/Drawing No T128116	
0,5-6 Hålslösheter		Skala/Scale 1:1	
30-120 Fillet radi		Storlek/Size A3	
120-400 ±0,5 Kanter brutna		Rev A	
400-1000 ±0,6 Edges broken			

This document must not be communicated or copied completely or in part, without our permission.
 FLIR SYSTEMS AB

Denna handling får ej delas annan kopieras i sin helhet eller delar utan vårt medgivande.
 Översattelse eller delvis utdrag med stöd av gällande lag.
 FLIR SYSTEMS AB



Basic dimensions for
add-on base support

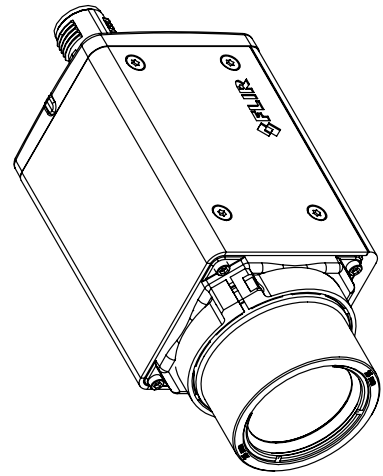
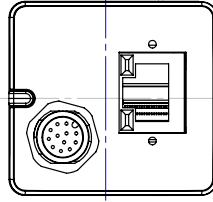
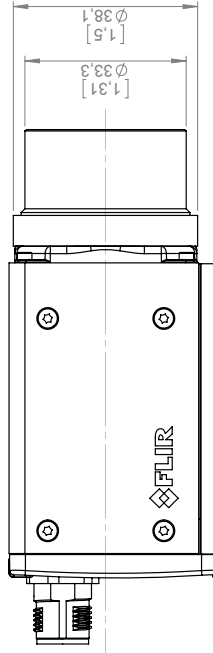
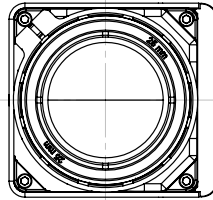
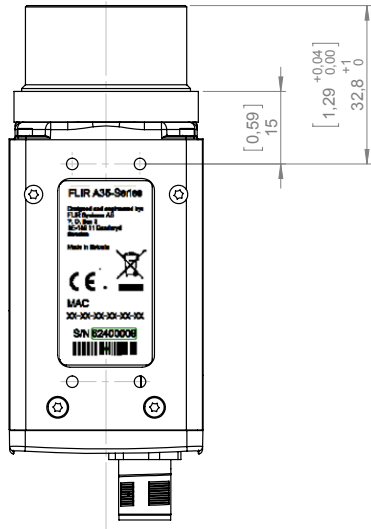
FLIR Sheet Scale 1:1 AIN: Rev A3 T128116	Date/Date: 2014-01-29 Drawn/Ändrad av: P. MARCUS Checked/Granskat av: MABR Material: - Surface Treatment: Ytbehandling/Surface treatment	Part Name: Basic dimensions Ax5 Part Number: f=7,5 mm to f=100 mm
---	--	--

Konstruktör/Designer: P. MARCUS Översatt/Translated by: P. MARCUS Konstruktör/Designer: P. MARCUS Översatt/Translated by: P. MARCUS Konstruktör/Designer: P. MARCUS Översatt/Translated by: P. MARCUS	Datum/Date: 2014-01-29 Ändrad/Modified: 2014-02-11 Kontrollerad/Checked: MABR Material: - Ytbehandling/Surface treatment: Ytbehandling/Surface treatment	Dimensioner/Dimensions: Basic dimensions Ax5 Fokallängd/Focal length: f=7,5 mm to f=100 mm
--	--	---

This document must not be communicated or copied, completely or in part, without our permission. FLIR SYSTEMS AB

Den här handling är ett tekniskt dokument. Översattelse från engelska till svenska är enbart till hjälp för att förstå innehållet. För ytterligare information, vänligen kontakta oss på info@datatec.de

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.

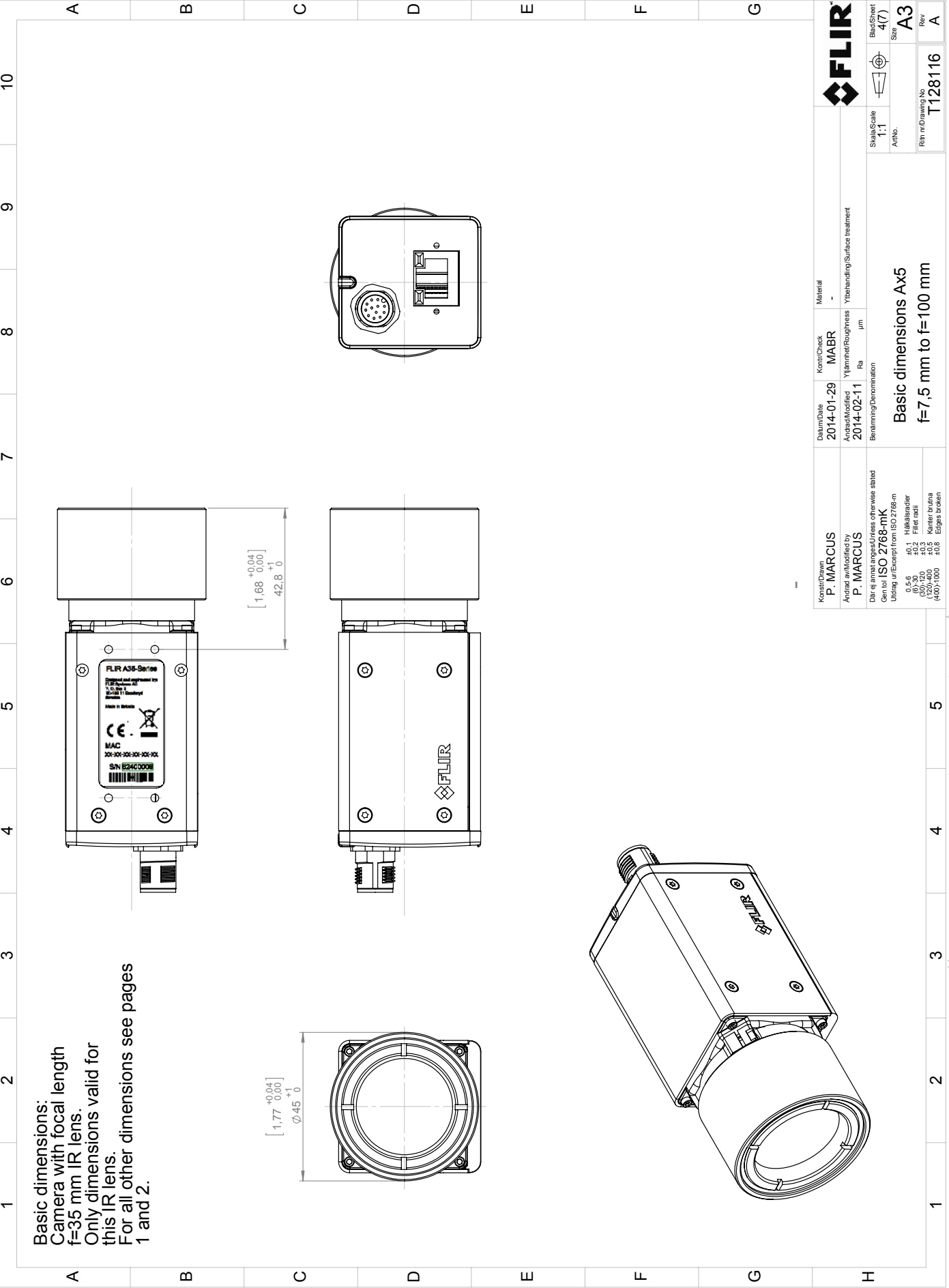
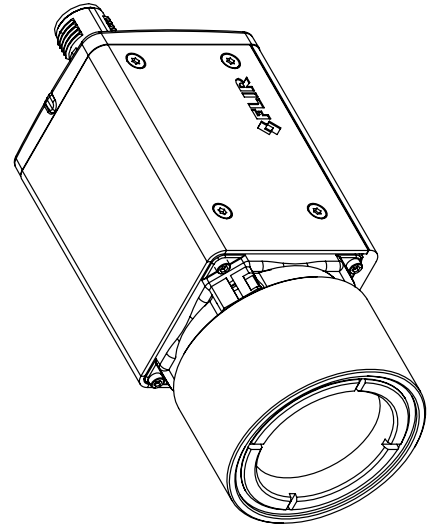
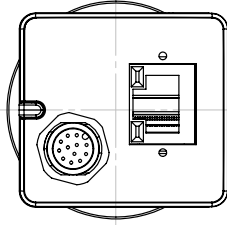
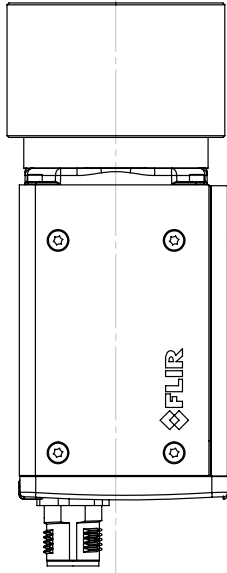
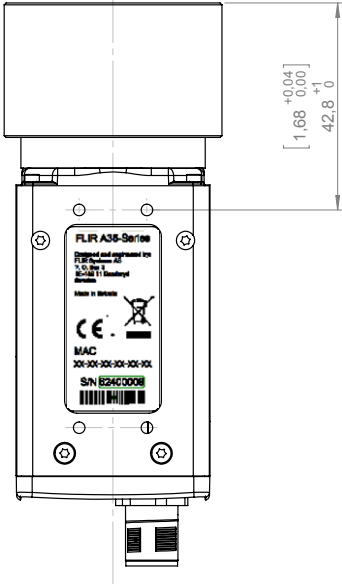
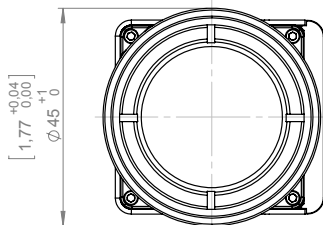


FLIR Sheet 3(7) Size A3 Rev A T128116 R1th n/Drawing No		Datum/Date: 2014-01-29 Kontor/Check: MABR Material: - Ytbehandling/Surface treatment:
Kerner/Drawn: P. MARCUS Använd av/Modified by: P. MARCUS Dator till ISO 2768-mk Utdrag ur Excerpt from ISO 2768-m 0,5-6 40,1 Fillobastader 630-120 40,3 Filer med 630-100 40,5 Kerner burina 6400-100 50,8 Edges burina	Andrad av/Modified by: P. MARCUS Ytämne/Roughness: Ra Benämning/Denomination:	Skala/Scale: 1:1 Aritm.: Basic dimensions Ax5 f=7,5 mm to f=100 mm

This document must not be communicated or copied completely or in part, without our permission.
 FLIR SYSTEMS AB

Denna handling får endast användas för de ändamål som avses i den överenskomna licensavtalet. Övrigt innehåll eller återtryckning utan vårt medgivande är strängt förbjudet.
 FLIR SYSTEMS AB

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.



This document must not be communicated or copied completely or in part, without our permission. FLIR SYSTEMS AB

Denne handling får aldrig anses som kopieret! Overladelse må kun bevirkes med skriftlig godkendelse fra FLIR SYSTEMS AB

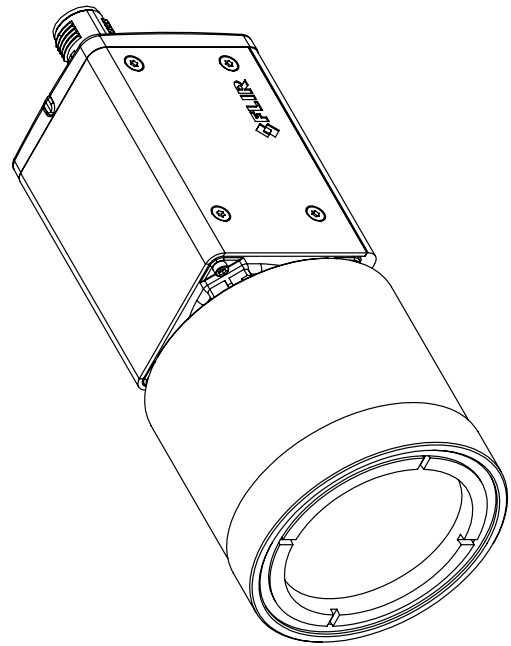
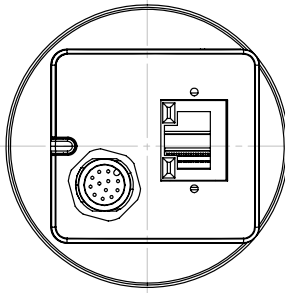
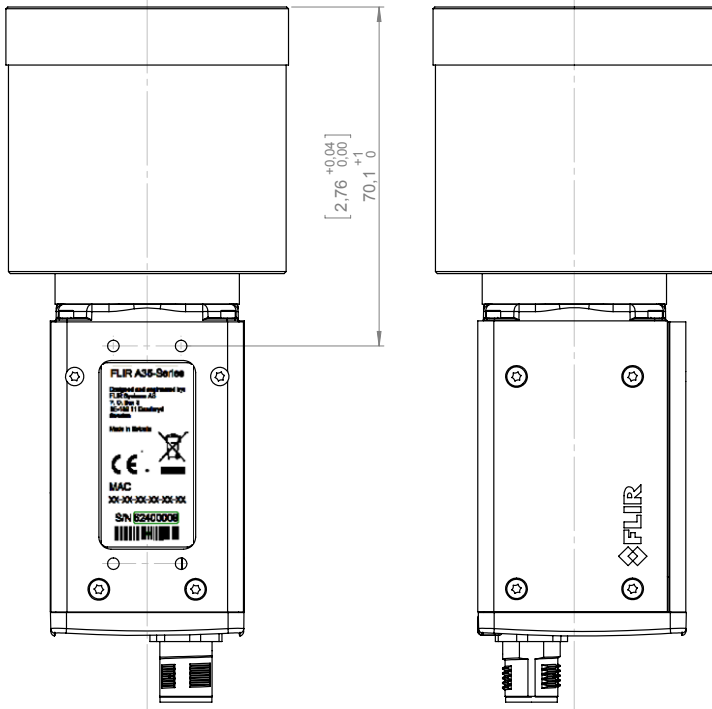
Kerner/Drawn P. MARCUS Anvendt/Modified by P. MARCUS Con. to ISO 2768-mK Udførelse af/Execution from ISO 2768-m 0,5-6 40,1 Filfabrikant (30)-120 40,3 Filfabrikant (400)-100 40,5 Kerner burina (400)-100 40,8 Kerner burina	Dato/Date 2014-01-29 Anvendt/Modified 2014-02-11 Benævnelse/Denomination	Kontrol/Check MABR Ylæmning/Roughness Ra µm	Material - Ybehandling/Surface treatment
Skala/Scale 1:1 A116.			Bladsheet 4(7) Sæt A3
Rith nr/Drawing No T128116			Rev A
Basic dimensions Ax5 f=7,5 mm to f=100 mm			



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.

$\left[\begin{matrix} +0,04 \\ 2,3 & 0,00 \\ +1 \end{matrix} \right]$
 $\varnothing 58,4 \text{ } 0$

$\left[\begin{matrix} +0,04 \\ 2,76 & 0,00 \\ +1 \end{matrix} \right]$
 $70,1 \text{ } 0$

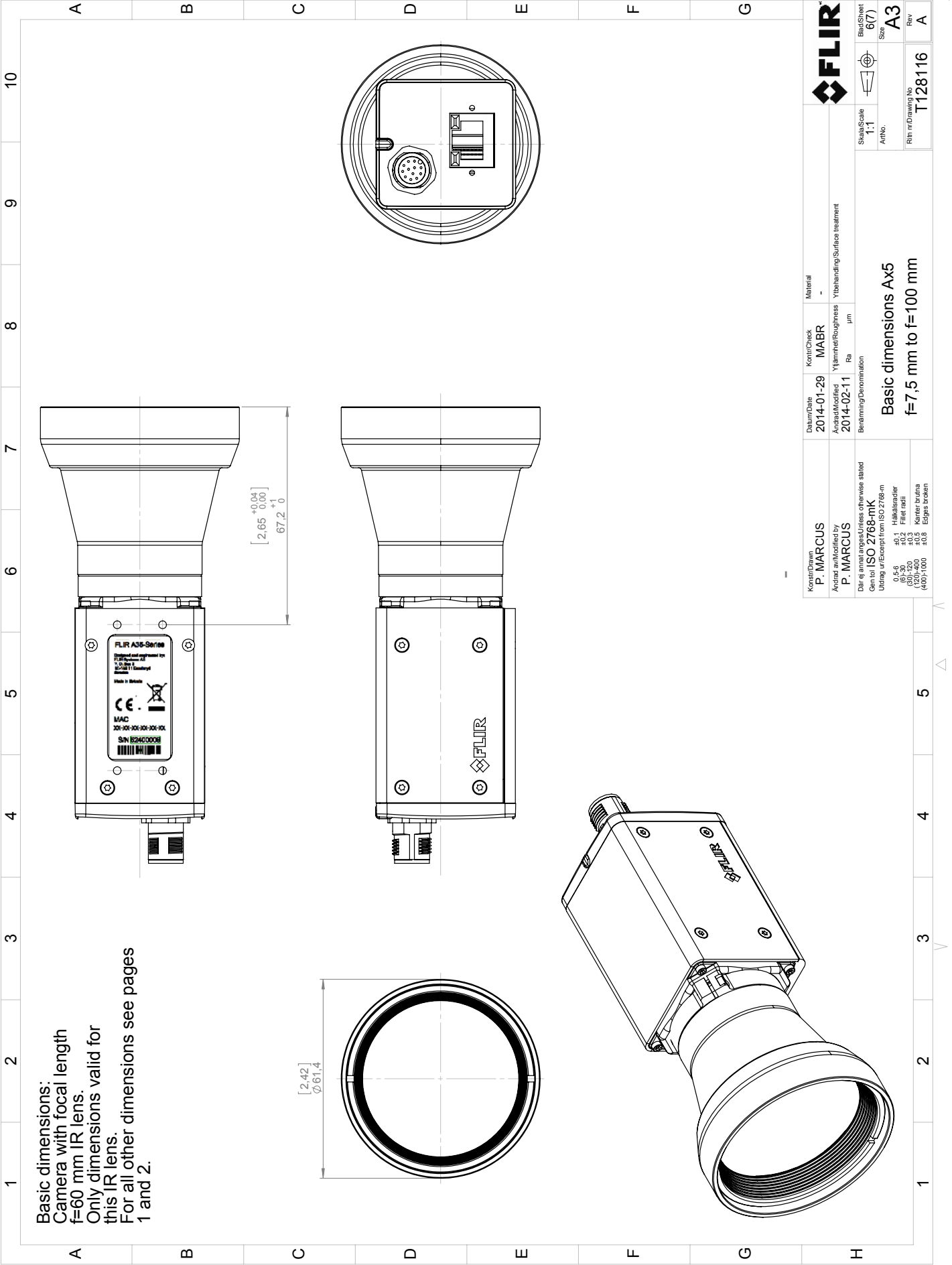


FLIR Status Scale 1-1 A116.	Date/Date 2014-01-29 Änder/Modified 2014-02-11 Benennung/Denomination	Kontr/Check MABR Ylämme/Roughness Ra µm	Material - Y-behandling/Surface treatment
Rev A3 T128116	Basic dimensions Ax5 f=7,5 mm to f=100 mm		
Konstr/Drawn P. MARCUS Änder/Modified by P. MARCUS Konf. to ISO 2768-mk Ultrag. utöverskrift från ISO 2768-m 0,5-6 30-120 40,3 40,5 40,7-100 20,8 Edges broken	Där de är angivna i parentes, om inte annat står i övrigt text.		

This document must not be communicated or
 copied, completely or in part, without our permission.
 FLIR SYSTEMS AB

Denna handling får ej delas utom i kopierad
 form eller på annat sätt medgivande
 av FLIR SYSTEMS AB

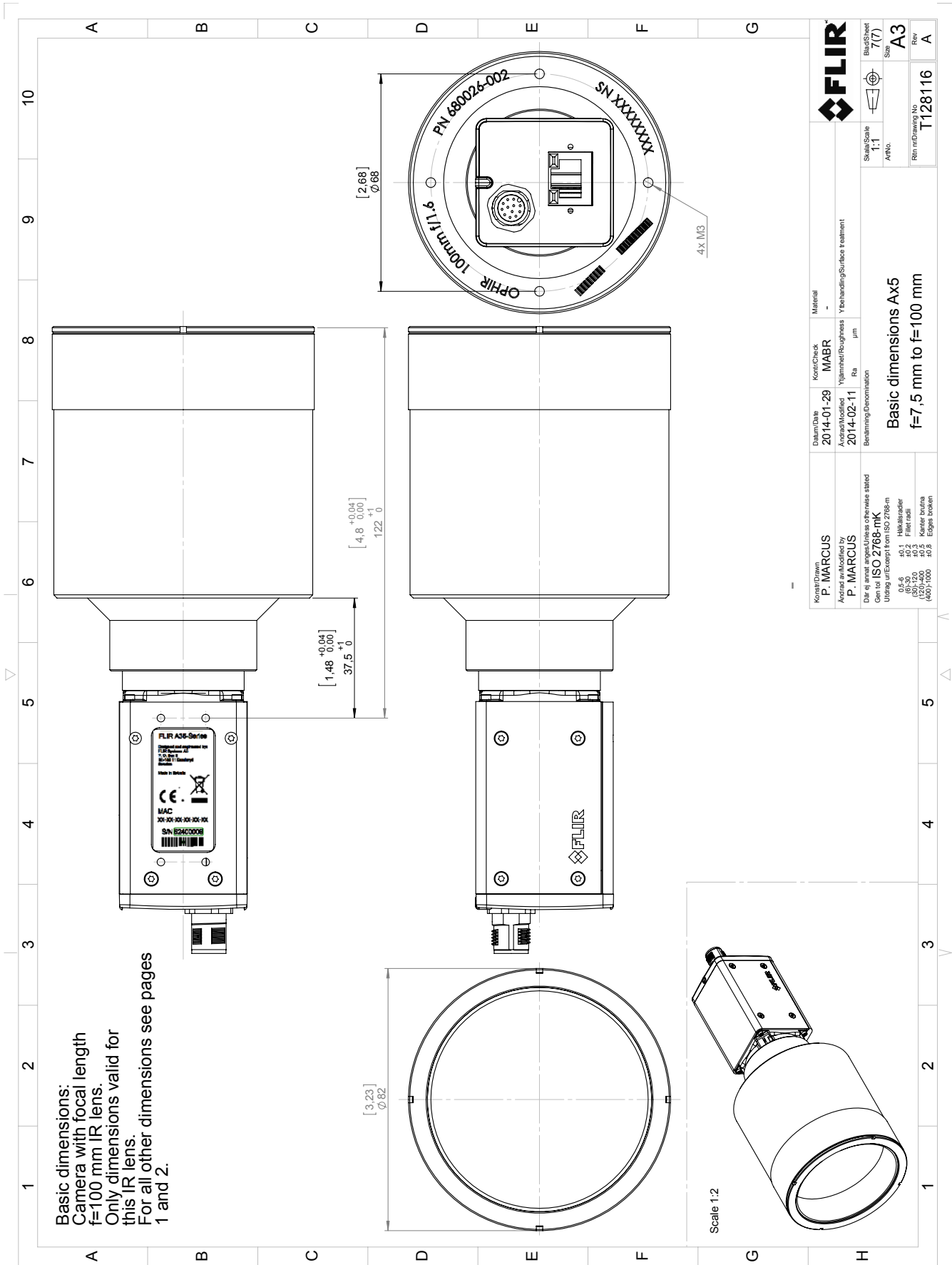
Basic dimensions:
 Camera with focal length
 f=60 mm IR lens.
 Only dimensions valid for
 this IR lens.
 For all other dimensions see pages
 1 and 2.



FLIR Scale 1:1 Size 6(7) A3 Rev A T128116		Datum/Date: 2014-01-29 Kontroller/Checked: MABR Material: - Ytbehandling/Surface treatment:
Kerner/Drawn: P. MARCUS Ändrad av/Modified by: P. MARCUS Kon till ISO 2768-mK Ultrång utseende från ISO 2768-m 0,5-6 Filfabrikator 60-120 Filfabrik 40,5 Kerner brunn 600-1000 200 Edges buren	Beräkning/Denomination: Basic dimensions Ax5 f=7,5 mm to f=100 mm	Material: Ytbehandling/Surface treatment:

This document must not be communicated or copied, completely or in part, without our permission.
 FLIR SYSTEMS AB

Den här handlingen får endast användas kopieras i sin helhet eller delar utan vårt medgivande.
 Övertidelse härav beivras med stöd av gällande lag.
 FLIR SYSTEMS AB



Deutschlands größter B2B-Onlineshop für Mess- und Prüftechnik.



Mess- und Prüftechnik, Die Experten.

Ihre Vorteile:

- > Eine unschlagbare Auswahl namhafter Hersteller
- > Hohe Lagerkapazität und kurze Wege
- > Bundesweite Lieferung und schnelle Zustellung meist innerhalb eines Tages
- > Mehrere tausend Mess- und Prüfgeräte
- > Tagesaktuelle Preise und Promotions
- > Warenkorbrabatt bei Online-Bestellung
- > Versandkostenfrei ab € 50,-
- > Dokumenten-Download u. v. m.

