

ExCam IP13xx



User manual



SAMCON

Prozessleittechnik GmbH

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1 Introduction

The ExCam IP13xx Series is a camera system (type 08) manufactured by SAMCON Prozessleittechnik GmbH which can be used for various applications, preferably within hazardous areas of the chemical and/or petro-chemical industry, at offshore plants, in mines, and at biogas plants.

The camera Series is suitable for the usage within the Ex zones 1, 2, 21, and 22 including the gas group IIC (all gases, steams, and fogs including acetylene, hydrogen and carbon disulphide) and the dust group IIIC (conductive dusts and flammable fibrous material), as well as in mining. Besides the stationary use, the explosion-proof cameras of the T08 ExCam Series are certified to be also used for mobile applications (hand-held etc.)

The Ex d stainless steel housing allows additional alloys, a powder coating, or coats of varnishes in different RAL colors as well as various mechanical accessories in order to extend the resistance towards extreme environmental conditions (salt water, acid, solar radiation, high mechanical strains etc.). Due to the usage of high-quality PTFE sealings, not only the protection level IP68 is reached but also the chemical resistance is maximized.



Figure 1.1 – ExCam IP13xx Series with wall mount bracket and roof




2 Technical Data

2.1 Parameters of the explosion protection

Identification marks according to

Directive 94/9/EG (until Apr 20, 2016):

Directive 2014/34/EU:

 II 2G (zone 1 and 2)
 II 2D (zone 21 and 22)
 I M2

Explosion protection (gas):

Ex d IIC T6 Gb or
 Ex d IIC T5 Gb or
 Ex d IIB T6 Gb or
 Ex d IIB T5

Explosion protection (dust):

Ex tb IIIC T80°C Db IP68 or
 Ex tb IIIC T95°C Db IP68 or
 Ex tb IIIB T80°C Db IP68 or
 Ex tb IIIB T95°C Db IP68

Explosion protection (mining):

Ex d I Mb

Protection level:

IP 68 (IEC /EN 60529)

Transportation / storage temp.(EX):

0° C...+50° C

Ambient temperature (EX)¹:

-60°C...+65°C (T6)

-60°C...+70°C (T5)

Nominated body:

TÜV Rheinland (number 0035)

EC Type Examination:

TÜV 14 ATEX 7539 X_1st supplement

IECEX TUR 14.0026X_issue No.1

Additional certificates:

EAC-Ex TC_RU_C_DE.MIO62.B.01921

Test protocol ATEX:

557/Ex.539.00/14

Test report IECEx:

DE/TUR/ExTR14.0026/00

Quality Assessment Report:

DE/BVS/QAR14.0006/00

¹ Maximum ambient temperature range relevant for explosion protection might deviate to the maximum functional temperature range. For maximum functional temperature range (MTBF) see chapter 2.12. Values depending on model

2.2 Electrical parameters of the camera

2.2.1 Axis P1354

Power supply: PoE, IEEE 802.3af class 3
Reference power: ± 48 V DC (44...54 V DC)
Maximum power input: 7.2 W

2.2.2 Axis P1357

Power supply: PoE, IEEE 802.3af class 3
Reference power: ± 48 V DC (44...54 V DC)
Maximum power input: 7.9 W

2.2.3 Axis P1364

Power supply: PoE, IEEE 802.3af/ 802.3at Type 1 class 3
Reference power: ± 48 V DC (44...54 V DC)
Maximum power input: 7.9 W (4.3 W typical)

2.2.4 Axis P1365

Power supply: PoE, IEEE 802.3af/ 802.3at Type 1 class 3
Reference power: ± 48 V DC (44...54 V DC)
Maximum power input: 7.9 W (3.6 W typical)

2.2.5 Axis P1365 MkII

Power supply: PoE, IEEE 802.3af/ 802.3at Type 1 class 3
Reference power: ± 48 V DC (44...54 V DC)
Maximum power input: 6.8 W (3.6 W typical)

2.3 Electrical parameters of the heating (optional)

Reference power U_N :	24 V DC
Nominal power P_N :	20 W for type L ($T_{AMB} \geq -30^\circ$)
	40 W for type L ($T_{AMB} \geq -60^\circ$)

Attention!

The power consumption of the housing heating is determined by the ambient temperature or, respectively, by the PTC features² found in the modules' individual operating points. In addition, the performance of the PTC load circuit is influenced by the switching-on characteristics of the CB06 circuit board, the load operation of the internal camera module as well as the convection cooling on the outside (heat dissipation via housing).

Per module, the switch-on power can reach $P_{max} > 100W$! Supply cable fine wire fuses have to be dimensioned accordingly by the end user. A super-slow (-TT-) trigger characteristic is recommended.

The typical continuous power rating at the low temperature range ($T_{AMB} -30^\circ C$) is $P_{(-30^\circ C)} = 12.2 W$ at a saturated condition

The typical continuous power rating at the artic temperature range ($T_{AMB} -60^\circ C$) is $P_{(-60^\circ C)} = 26.8 W$ at a saturated condition

The typical start-up peak at the low temperature range (1x HP05 heating element) is $I_{max} > 4000 mA$!

The typical start-up peak at the artic temperature range (2x HP05 heating element) is $I_{max} > 8000 mA$!

The typical in-rush-duration for $I_{PTC} < 1000mA$ per module is $t_{ON} \leq 45s$

The typical in-rush-duration for $I_{PTC} < 500mA$ per module is $t_{ON} \leq 120s$ (saturated range/ steady current)

² $P_{HP05} = K \times A \times T$ ($K=5.5W/m^2$)

2.4 System cable SKD02-T

Description:	Samcon System Cable Digital (type „SKD02-T“) for low temperature ranges, data transfer and power supply of the camera modules M1145 and M1145-L (DIN EN 60079-14: 2014 conform)
Sheath color:	Yellow-green (GN), similar RAL6018
Ex d marshalling:	via the cable gland ¹³ located on the right (according to <u>DIN EN 60079-14:2014</u> [chapter 10.6.2]) At a cable connection length of ≥ 3 m : (without integrated pressure barrier/ with elastomer sealing on the outer sheath) e.g.: „ADE 4F MsNi Type5 - M20x1.5 (CAPRI)“, with additional strain relief; At a connection cable length of < 3m : (with integrated pressure barrier / epoxide compound grouting of the single conductors and duroplast/elastomer sealing of the outer sheath) e.g.: „8163/2 PXSS2K - M20x1.5 (R. Stahl GmbH)“
Outer diameter:	9.1 ± 0.2mm
Wall thickness:	1.0 ± 0.1mm
Bending radius:	10 x outer diameter at installation 5 x outer diameter after installation
Tensile:	Max. 140N
Temperature range:	-10° C to +50° C (at point of installation) -60° C to +80° C (fixed installed)
Conductor design:	4 x 2 x AWG22/1 blank, CAT.6a
Isolation:	SFS-PE foamed
Core diameter:	1.52 ± 0.02 mm
Color code:	IEC 708-1
Pair shielding:	Compound aluminum foil
Shielding:	Copper braid, multiple wires 0-10 vz, opt. coverage approx. 85%
Outer sheath:	PUR FHF
Characteristics:	PUR halogen free, flame resistant (EN 60332-1-2), UV and ozone resistant, high chemical resistance, EMV shielded (q.v. www.samcon.eu , data sheet SKD02-T)

³ According to the current standard DIN EN 60079-14:2014, the dimensioning/execution of the cable gland with or without integrated pressure barrier / compound grouting does not depend anymore on the marked gas explosion group (IIB, IIC) or the Ex d pressure chamber volume (<2000cm³, ≥2000cm³) but solely on the length of the suitable connection cable (<3m, ≥3m)

User interface:

P(Plug) version: RJ-45 Stecker (EIA/TIA-568B), e.g. Weidmüller IE-PS-RJ45-FH-BK, Phoenix Contact VS-08-RJ45-5-Q/IP20 etc., 10BASE-T/100BASE-TX PoE

K(terminal block) version: about 12 cm stripped: 8 x single conductors twisted pair (solid conductor $A=0.33\text{mm}^2$, $\varnothing=0.64$ mm approx. 6 mm stripped), 1 x shield (Cu braid tinned 1.5mm^2 , ferule color code according to DIN 46228) 10BASE-T/ 100BASE-TX PoE

2.5 Supply cable (optional)

Description: Ölflex® 440P⁴ (*U.I. Lapp GmbH*), power supply for the PTC heat load circuit as well as for the electrical regulation of the CB06 for T08 Ex-Cam with the model key „L“ and „LL“, (DIN EN 60079-14: 2014 conform)

Sheath color: Silver grey (GY) matt, similar RAL7001

Ex d marshalling: via cable gland 2⁵ located on the left (according to DIN EN 60079-14:2014 [Chapter 10.6.2])
 At a cable connection length of **$\geq 3\text{m}$** :
(without integrated pressure barrier/ with elastomer sealing on the outer sheath) e.g.: „ADE 4F MsNi Type5 - M20x1.5 (CAPRI)“, with additional strain relief;
 At a connection cable length of **$\leq 3\text{m}$** :
(with integrated pressure barrier / epoxide compound grouting of the single conductors and duroplast/elastomer sealing of the outer sheath) e.g.: „8163/2 PXSS2K - M20x1.5 (*R. Stahl GmbH*)“

Outer diameter: 7.5 mm

Outer sheath: Polyurethane mixture TMPU according to EN 50363-10-2 / VDE 0207-363-10-2

Bending radius: 12.5 x outer diameter (occasional movement)
 4.0 x outer diameter (fixed installation)

⁴ Further cables available upon request, e.g. „Ölflex® Petro FD 865 CP“ (high resistance against oil and drilling liquids) or „XPLE Armoured 3 x 2.5“ (extremely robust, particularly designed for offshore environments)

⁵ According to the current standard DIN EN 60079-14:2014, the dimensioning/execution of the cable gland with or without integrated pressure barrier / compound grouting does not depend anymore on the marked gas explosion group (IIB, IIC) or the Ex d pressure chamber volume ($<2000\text{cm}^3$, $\geq 2000\text{cm}^3$) but solely on the length of the suitable connection cable ($<3\text{m}$, $\geq 3\text{m}$)

Conductor design:	3G1.5 (0012838), 3 x 1.5 mm ² (ø=1.4 mm), Fine wired tinned copper strand according to IEC 60228 / VDE 0295, class 5, with protective earth (GN/YE)
Copper index:	43.0 kg/km
Weight:	96.0 kg/km
Tensile strength:	15 N/mm ²
Characteristics:	Resistant to oil and drilling fluids according to IEC 61892-4: supplement D, wear and notching resistant, halogen free (VDE 0472-815) and flame-retardant according to IEC 60332-1-2, re- sistant to hydrolysis and microbes, UV re- sistant, additional testing requirements accord- ing to IEC 60811, EN 50396 and EN 50396 (q.v. www.samcon.eu , data sheet Ölflex 440P)
Conductor identification code:	Black conductors with white numbers with GN/YE- protective earth according to DIN EN 50334 / VDE 0293-334
Classification:	ETIM 5.0 Class-ID: EC 000104, ETIM 5.0 type: Control cable
Conductor insulation:	Thermal Plastic Elastomer (TPE)
Nominal current U ₀ /U:	300/500 V AC/DC
Test voltage:	3000 V
Temperature range:	-40°C to +90°C (occasional movement) -50°C to +90°C (fixed installation)
User interface:	P (Plug) version: <i>n/a / upon request</i> K (terminal block) version: 3x 1.5 mm ² (3G1.5) Cu strand with ferules (color code according to DIN 46228). Sheath about 12 cm stripped and furnished with bend relief / shrink tubing

2.6 Technical specification of the camera module

Note:

Technical details of the internal CCTV module such as light sensitivity, resolution, frame rate sensor, shutter times, lens details, streaming functions, supported network protocols, event trigger, storage options, and picture parameter setting via the web interface are thoroughly provided in the data sheets of the camera manufacturer and not part of the T08 ExCam user manual.

2.6.1 Axis P1354

User manual:

http://www.axis.com/files/manuals/um_p1354_1463736_en_1505.pdf

2.6.2 Axis P1357

Data sheet:

http://www.axis.com/files/datasheet/ds_p1357_1471705_en_1505.pdf

User manual:

http://www.axis.com/files/manuals/um_p1357_1465567_en-1506.pdf

2.6.3 Axis P1364

Data sheet:

http://www.axis.com/files/datasheet/ds_p1364_1511096_en_1512.pdf

User manual:

http://www.axis.com/files/manuals/um_p1364_1510439_en_1601.pdf

2.6.4 Axis P1365

Data sheet:

http://www.axis.com/files/datasheet/ds_p1365_60562_en_1503_hi.pdf

User manual:

http://www.axis.com/files/sales/um_p1365_1489706_en_1507.pdf

2.6.5 Axis P1365 MkII

Data sheet:

http://www.axis.com/files/datasheet/ds_p1365mkii_60562_en_1603.pdf

User manual:

http://www.axis.com/files/manuals/um_p1365mkii_1489706_en_1604.pdf

2.7 Other technical data

Permitted ambient temperature (MTBF)⁶:

-10 °C ... +50 °C (Type N / P1365)
 -10 °C+40 °C (Type N / P13xx)
 -30 °C ... +40 °C (Type L)
 -60 °C ... +40 °C (Type LL)

Protection level EN 60529/ IEC 529:

IP68

Test conditions (>IP67): 24h/ 3m water column, pH-neutrality, temperature of the liquid medium: $+5^{\circ} C \leq T_{Water} \leq +20^{\circ} C$.

An additional mechanical protection against water jets is recommended

Housing material⁷ of the pressure resistant enclosure (DIN EN 60079-1: 2008) according to DIN EN 10027-2: 2015-07 (making system for steel):

Housing material (standard)

MNo.: 1.4404 (X2CrNiMo17-12-2),
AISI 316L / V4A

Housing material (optional)

MNo.: 1.4301 (X5CrNi18-10),
AISI 304 / V2A
 MNo.: 1.4305 (X8CrNiS18-9),
AISI 303
 MNo.: 1.4401 (X5CrNiMo17-12-2),
AISI 316 / V4A
 MNo. 1.4571 (X6CrNiMoTi17-12-2),
AISI 316Ti / V4A

⁶ Functional temperature range concerning the operational temperature range of the installed components according to manufacture declarations (MTBF – meantime ration duration between failures). For ambient temperature ranges relevant for explosion protection (ATEX, IECEx) see chapter 2.1 – Explosion protection)

⁷ The available stainless steel materials dispose of different specific characteristics such as mechanical and chemical resistance. It is possible to optimize the corrosion behavior in highly acidiferous environments or at offshore applications by selecting the applicable housing material. An electro-polished or powder-coated surface in various RAL colors (standard: RAL7035) is possible

Protective coating⁸:

Standard color RAL7035 (all RAL colors and special colors possible!), DURALMIT® 2K-PUR structure, type DSPT (isocyanate netted, polyester modified acrylate resin, fine structure (1.6...2.0 [mm] nozzle), surface resistance $\leq 9^{+11}[\Omega]$, layer thickness ≤ 0.2 [mm], screw connections, flat gaskets and cable glands are excluded from the coating

Additional metallic/non-metallic materials of the Ex d housing protection system:

Zincd spring steel MNo.: 1.0330, PTFE with glass microbeads (GYLON® Style 3504 blue), silicone-coating (Silcoset 105 incl. CureAgent 28), VMQ (silicone), thermos transfer foil made of polyester (acetone resistant), cable glands made of brass, nickel-plated (MsNi)

Sight glass material:

Borosilicate glass (IImadur 10/ I-420) (DIN7080:2005-05)

Internal materials:

Aluminum die cast, zincd (protection housing of the camera module), polyamide (PA6.6/ PA2000) and polyoxymethylene (POM) isolators and supporting adapters, T08 aluminum universal adapter (EN AW-ALSi1MgMn), PTC-ceramics, PUR and additional thermoplastic plastics, optical and electrical components etc.

Attention: *The Axis module is equipped with an ML614R battery which supplies the real time clock (RTC). These lithium button cells (3.0 V) dispose of 1.2 dimethoxymethane; ethylenglycoldimethylether (EGDME), CAS-No. 110-71-4*

⁸ The protective coating of the housing underlies the explosion protection! Affected are exclusively the outside metal surfaces. The gaps preventing the transmission of an ignition / threads as well as the sealings remain unaffected. The modification of the housing surface meets the requirements acc. to DIN EN 60079-0: 2012 chapter 7 – non-metallic housings and non-metallic housing components (UV resistance, temperature index TI or relative heat index RTI-mechanical acc. to ANSI/UL 746B or heat and cold resistance). The avoidance of electrostatic charges is reached by the surface resistance $\leq 9^{+11} \Omega$ (max. 50% relative humidity) and the limitation of the layer thickness to 0.2mm (IIC)/ 2mm (IIB). Due to the surface coating, the thermal value and the convection cooling change. The maximum permitted power loss feed into the housing is not affected by it!

Weight (without accessories):	6800 g (with „K1“ cable gland flange) 7500 g (with „K2“ cable gland flange)
Weight of accessories:	900 g (wall mount bracket <u>WMB-L</u>) 800 g (Twin adapter <u>WMB-xTA</u>) 750 g (Hood <u>WPR-VA2.1</u>) 100 g (Hinge attachment <u>SCH-VA2.x</u>) 450 g (clamp attachment <u>CMB-S</u>) 1200 g (Samcon <u>cool.Jacket VA2.2</u>) <i>Further accessories upon request!</i>
Dimension (wxhxd) ⁹ :	113.0 mm x 138.5 mm x 260.2 mm (K1 flange) 113.0 mm x 138.5 mm x 276.0 mm (K2 flange)
Dimension with accessories (BxHxT) ¹⁰ :	135.0mm x 238.0mm x 413.0mm (with wall mount bracket and hood)
Fitting of the flame proof gap preventing the transmission of ignition (cylinder) (EX) of the T07-VA2.2.x.x housing:	
<u>Flange / body</u>	Nominal diameter: 91 mm (plain cylindrical) Clearance fit: H8 f7 (DIN ISO 286) Tolerance: (-71...-36) µm ... (0...+54) µm Gap length > 12.5mm (acc. to DIN EN 60079-1) largest gap length < 0.15mm (DIN EN 60079-1) Average surface finish: R _a ≈ 2.0 µm (DIN ISO 468) / R _a ≤ 6.3 µm acc. to DIN EN 60079-1: 2008 [5.2.2]
<u>Cable glands</u>	2 x M20*1.5_12 mm (ISO metrical fine thread acc. to DIN13-2), quality 6H (medium or fine acc. to ISO 965-1 / ISO 965-3), supporting/gripping threads ≥ 5 (acc. to requirements of DIN EN 60079-1: 2008 [5.3] table 2 „Cylindrical gaps“)
Media resistance:	<i>Checked upon request only!</i> <u>Generally:</u> Resistant to corrosion as well as chemically high-resistant to a variety of substances used in the industrial environment and suitable for offshore applications (q.v. the general specifications of stainless steel MNo.: 1.4404, surface finish of the Ex d housing, Gylon flat sealing etc.)

⁹ Dimension stainless steel housing T07 VA2.2 with pin and without cable gland and external accessories. For additional / detailed dimensions see chapter 10 – technical drawings

¹⁰ Dimension camera housing T07 VA2.2 with wall mount bracket WMB-L and hood WPR-VA2.2 (axially aligned, maximum depth)

3 Safety guidelines

Please observe the safety guidelines indicated in der EX installation manual of the T08 ExCam Series!

4 Illustration of the model key

The following model options are currently available for the ExCam IP13xx Series:

Ex product name ¹⁾	Model options					
	Type ²⁾	Housing combination ³⁾	Gas expl. group ⁴⁾	Cable length/m SKD02-T/Ölflex 440P ⁵⁾	Cable termin. ⁶⁾	Temperature range ⁷⁾
ExCam IP1354, ExCam IP1357, ExCam IP1364, ExCam IP1365 (MKII) ...	T08-	VA2.2.K1.BOR-	C-	005-	K-	N
	T08-	VA2.2.K1.BOR-	C-	005-	P-	N
	T08-	VA2.2.K2.BOR-	C-	005-	K-	N
	T08-	VA2.2.K2.BOR-	C-	005-	P-	N
	T08-	VA2.2.K1.BOR-	C-	005-	K-	L
	T08-	VA2.2.K1.BOR-	C-	005-	P-	L
	T08-	VA2.2.K1.BOR-	C-	005-	K-	LL
	T08-	VA2.2.K1.BOR-	C-	005-	P-	LL

Table 4.1 – Model key

- 1) ExCam IP135x = Functional camera description of the ExCam IP13xx Series
- 2) **T08** = Production type concerning the certifications of the „T08 ExCam Series“, EC type examination: „TÜV 14 ATEX 7539 X_1st supplement“, „IECEX TUR 14.0026X_1st supplement“ and EAC-Ex TC-RU-C-DE.MIO62.B.01921“
- 3) **VA2.2.K1.BOR** = T07 Ex d housing with large diameter ($\varnothing_{VA}=113$ mm) and large sight glass ($Q_{BOR}=72$ mm effective, translucent area)
- 4) **VA2.2.K1.BOR** = T07 housing with maximum body length ($l_R = 238$ mm)
VA2.2.K1.BOR = K1 cable gland flange (axial cable gland(s))
VA2.2.K2.BOR = K2 cable gland flange (orthogonal cable gland)
 - *optional* – for space sensitive conditions (bending radius cable etc.), Shorter housing body length, maximum one cable gland possible!
VA2.2.K1.BOR = Borosilicate sight glass (Standard execution, for video cameras within visible spectral range: $\lambda = 350 \dots 2000$ [nm]. Not suitable for thermographic applications)
- 5) **C** = Explosion group IIC/ IIIC (Standard execution. Suitable for all gases, including hydrogen, acetylene, carbon disulfide, flammable fibrous material and non-conductive dusts)

- 6) **005 =** Length of the connection line in meter at delivery. The standard cable length is 5 m (minimum/maximum cable length: 001...100 [m])
- Information: According to **DIN EN 60079-14:2014 [chapter 10.6.2]** it is, at a cable length of ≥ 3 m, possible to use cable glands **without an integrated pressure barrier** as well as an elastomer sealing on the outer sheath and an additional strain relief. At a cable length of < 3 , the cable gland has to be carried out **with an integrated pressure barrier**, this means with epoxide compound grouting of the single conductors and with duroplast / elastomer sealing on the outer sheath, dimensioned appropriately! The dimension of the cable glands are hence variable.*
- 7) **K =** Terminal block termination (standard)
- SKD02-T: CAT6a, 8x single conductor AWG22/1 „twisted pair“ solid conductor copper blank, $0.33 \text{ mm}^2 / \varnothing=0.64 \text{ mm}$, approx. 6 mm striped, 1x shield CU-braid tinned 1.5 mm^2 with ferules blue
- Ölflex 440P: Supply, $3 \times 1.5 \text{ mm}^2$, Cu Sheath about 12 cm stripped and furnished with bend relief / shrink tubing
- P =** Plug- termination (optional)
- SKD02-T: CAT6a, RJ-45 network plug (heavy duty), AWG 26-22, e.g.: Type Weidmüller „IE-PS-RJ45-FH-BK“ or type Phoenix Contact „VS-08-RJ45-5-Q/IP20“, contact assignment always acc. to specification EIA/TIA-568B 1
- Ölflex 440P: Q.v. terminal block termination
Plug-termination *n/a* or upon request
- 8)
- | | | |
|-------------|--|--|
| N = | Normal ambient temperature range (MTBF): | $T_{\text{AMB_N}}$: -10 ... +40 [°C] (P135xx) |
| N = | Normal ambient temperature range (MTBF): | $T_{\text{AMB_N}}$: -10 ... +50 [°C] (P1365) |
| L = | Low ambient temperature range (MTBF): | $T_{\text{AMB_L}}$: -30 ... +40 [°C] (P135xx) |
| L = | Low ambient temperature range (MTBF): | $T_{\text{AMB_L}}$: -30 ... +50 [°C] (P1365) |
| LL = | Lowest ambient temperature range (MTBF): | $T_{\text{AMB_LL}}$: -60 ... +40 [°C] (P135xx) |
| LL = | Lowest ambient temperature range (MTBF): | $T_{\text{AMB_LL}}$: -60 ... +50 [°C] (P1365) |

5 Commissioning



Attention!

Please observe the national regulations regarding security, installation, and accident prevention (e.g. DIN EN 60079-14 or DIN VDE 0118-1:2010-02) for the erecting of electrical plants in mining etc.) as well as the safety guidelines described in this user manual and the EX installation manual!



Attention!

Please observe the installation and commissioning advices described in the ATEX/ IECEx/ EAC-Ex Ex-installation manual!

5.1 Step 1: Installation

Install the ExCam[®] IP13xx at the desired location.

Mounting options and conditions, accessories, as well as safety guidelines are described in the EX installation manual of the T08 ExCam[®] Series.

5.2 Step 2: Electrical connection



Attention!

The electrical connection of the equipment must be executed by qualified personnel only!



Attention!

It is mandatory that the housing of the ExCam[®] Series has to be grounded via a PE-connection!



Attention!

The minimum cable length of the connection line must not be less than one meter! The connection cable has to be laid in a protected manner!



Attention!

Please observe the national regulations regarding security, installation, and accident prevention (e.g. DIN EN 60079-14 VDE 0118-1:2010-02 etc.), as well as the safety guidelines described in this user manual and the EX installation manual!

The ExCam® IP13xx Series is delivered with the electrical connection cable type SKD02-T suitable for the hazardous area. Optionally, the camera can dispose of a power cable (standard is a type „Ölflex® 440P“). The maximum cable length is 100 m (depending on electromagnetic tolerance) and can be determined individually to reflect the particular customer specifications. The minimum cable length is 1 meter.

The ExCam® IP13xx Series is manufactured with a cable pigtail reflecting the desired cable length. Any electro-technical work inside the camera's flameproof enclosure done by the user is prohibited. Depending on the model option, the ending of the camera's cable connection is either stripped to the blank Cu conductors or furnished with a plug.

5.2.1 Potential equalization

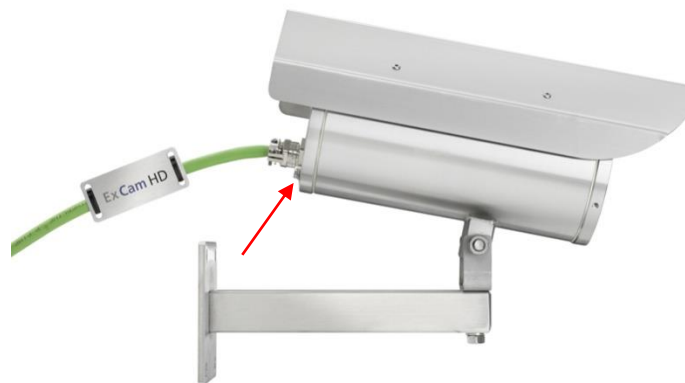


Figure 5.1 – ExCam IP13xx potential equalization

The potential equalization (earthing of the camera housing) is mandatory in order to avoid electrostatic charging and hence spark generation. The screw terminal at the lower right hand side of the housing's rear side is intended for that purpose (q.v. figure 5.1). The profile of the potential equalization has to reflect the national grounding instructions (min. 4 mm²).

Connection table:

Potential	Color (IEC 60757)	Profile	Comment
PE	GN/YE	4 mm ² (fix)	Screw terminal: Slotted screw M4 x 0.7 (DIN 84) with washer Ø 9 mm (DIN 125A). 3Nm tightening torque has to be observed!

Table 5.1 – Potential equalization

5.2.2 Connection and protection

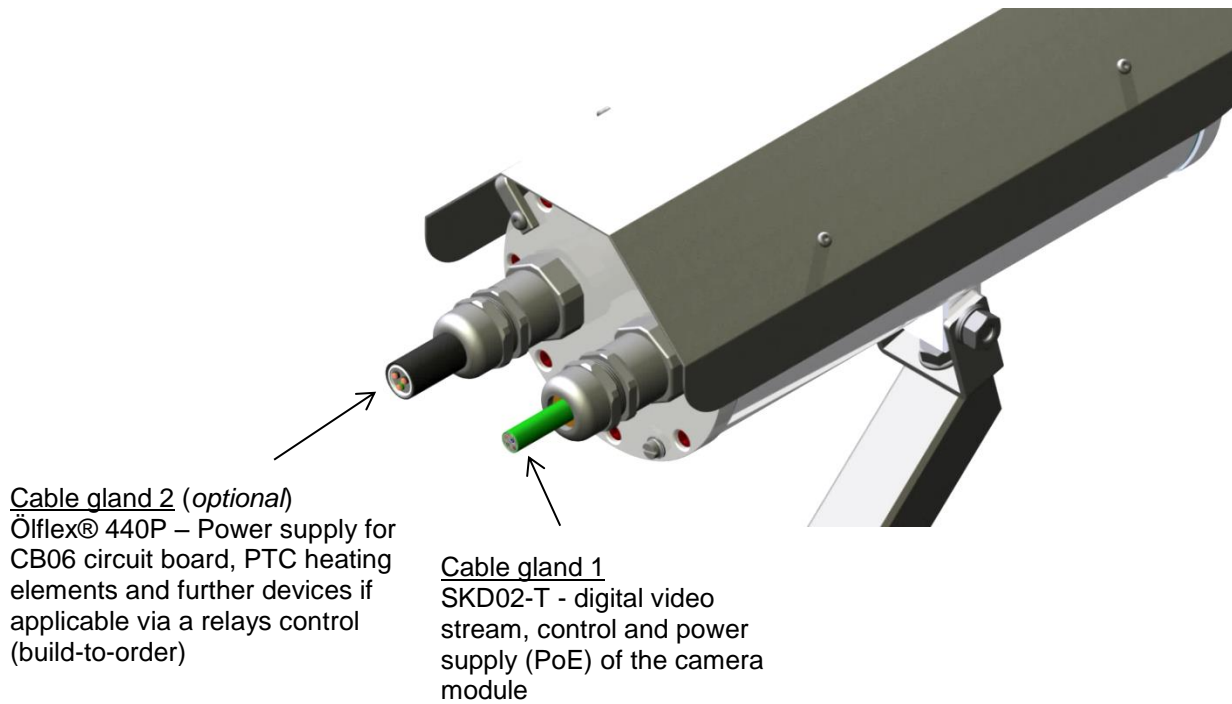


Figure 5.2 – Cable gland and supply cable



Figure 5.3 – ExCam IP13xx T08-VA2.2.K1.BOR-C-XXX-K-N



Figure 5.4 – ExCam IP13xx T08-VA2.2.K1.BOR-C-XXX-P-N

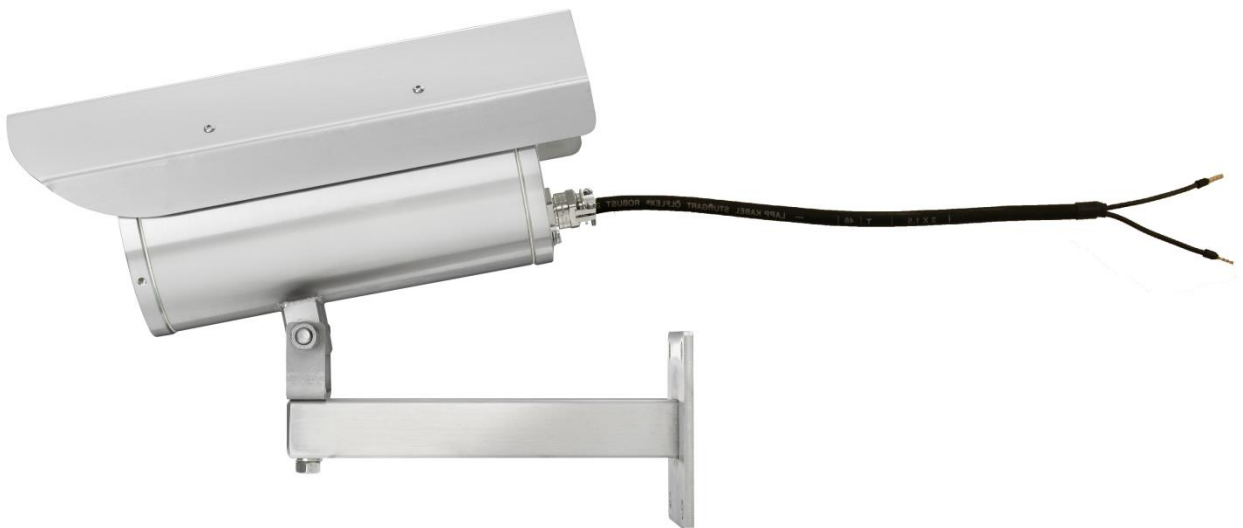


Figure 5.5 – ExCam IP13xx T08-VA2.2.K1.BOR-CB-XXX-P(K)-L(L)(H)

Via the 8 (+1) -wire green patch cable SKD02-T, the communication and the data transfer to connected network devices as well as the power supply (PoE) of the camera is carried out. In order to guarantee the power supply (Power Device, PD) of the ExCam IP13xx Series, a Power-over-Ethernet component (Power Sourcing Equipment, PSE) has to be available at the connecting side (e.g. a PoE Switch, a PoE Injector, or Midspan) which meets the specification IEEE 802.3af or 802.3at Type 1 Class 3 („classification power: 26-30 mA @48 VDC, max. feed power PSE: 15.4 W, max. removal power PD: 6.49 – 12.95 W“). A 100 Mbit Ethernet Connection (100BASE-TX) is used for the ExCam IP13xx data transfer.

In case the camera disposes of a plug (figure 5.4); it has to be plugged into the RJ45 PoE slot of the network device. Due to the design, a faulty connection or pin assignment is not possible. The network device can already be supplied with power, prior to connecting it to the camera, hence there is no „power ON“ priority which has to be observed.

In case the ExCam IP13xx disposes of a terminal block termination, the correct connection of the individual pins in accordance with EIA/TIA-568B has to be observed (q.v. table 5.2). Generally, the pins of the same color code (IEC60757) are connected.

Attention: The general specification for PoE allows different operation modes for PDs (ExCam IP1354, ExCam IP1357, ExCam IPQ1775 etc.):

Mode A (end span): This is usually used by switches; the supply voltage is executed as phantom power on the data lines. Both polarities are possible.

Mode B (mid span): This is usually used by PoE injectors; the power supply and protocol transfer is executed on separate pins (plug / pin contact 4.5 is the positive pole and 7.8 is the negative pole). The T08 ExCam Series supports both modes and the used power source (PSE) determines the mode.

During operation and interaction with a visualization / video management software or during web interface access, it is allowed disconnecting the ExCam IP13xx Series from and later reconnecting it to the network (hot plugging). The same is valid for a switching of due to rebooting purposes.

Attention: „Hot plugging“ as well as the connection and separation of the data and power cable SKD02-T with/of network devices and terminal blocks under power is only allowed within the safe area (non-hazardous atmosphere)!

The pin assignment of the SKD02-T according to EIA/TIA-568B standard for 100BaseTX with PoE (IEEE 802.3af) is done as follows:

Pin / Potential		Color SKD02-T (IEC60757)	Plug / pin contact (TIA-568B)	Cross section area AWG22/1		Remarks
Mode A	Mode B			Area [mm ²]	Diame- ter [mm]	
Tx+ / PoE ±48 VDC	Tx+	WH / OG	1	0.33	0.64	Solid conductor Cu blank
Tx- / PoE ±48 VDC	Tx-	OG	2	0.33	0.64	Solid conductor Cu blank
Rx+ / PoE GND	Rx+	WH / GN	3	0.33	0.64	Solid conductor Cu blank
<i>n.a.</i>	PoE +48 VDC	BU	4	0.33	0.64	Solid conductor Cu blank
<i>n.a.</i>	PoE +48 VDC	WH / BU	5	0.33	0.64	Solid conductor Cu blank
Rx- / PoE GND	Rx-	GN	6	0.33	0.64	Solid conductor Cu blank

<i>n.a.</i>	PoE GND	WH / BN	7	0,33	0.64	Solid conductor Cu blank
<i>n.a.</i>	PoE GND	BN	8	0,33	0.64	Solid conductor Cu blank
shield/ GND (complete conductor bunch)		BK	9	<i>n/a</i>	<i>n/a</i>	Shield braid of tinned copper wires Ø=0.13 mm (AWG 36)
shield (single, twisted pair pins)		<i>n/a</i>	<i>n/a</i> / 10	<i>n/a</i>		Aluminum syn- thetic strapp, twisted

Table 5.2 – Pin assignment SKD02-T and plug contact RJ45

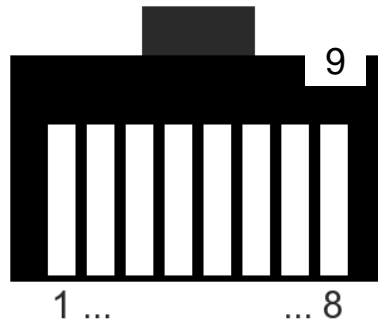


Figure 5.6 - RJ45 Contact assignment

Particularly in EMC critical environments, it is important to earth the shield at the terminal block side (q.v. figure 5.3 – pin with black shrink tubing and blue ferule).

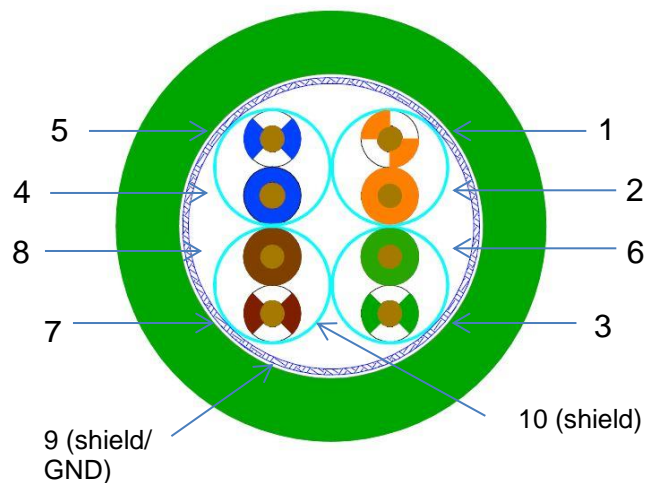


Figure 5.7 – SKD01 Pin assignment

In case the ExCam IP13xx is supplied via a PoE capable device, an additional safeguarding of the power supply is not necessary. The power supply is executed by the PoE network device via an electronic with intelligent set-up. The camera as well as the connection is permanently monitored in order to avoid any failure or defects in case of a short-circuit fault.

For a camera with terminal block execution, it is possible to operate the camera either with a PoE capable network device or with a separate 48 V DC power supply (supply voltage and network streams are self-sustaining). In this event an adequate supply safeguarding has to be dimensioned.

Recommended is a **300 mA medium time lag fuse**.

If the Ex CCTV application calls for a separate 48 V DC supply voltage, the wire/pin assignment has to reflect **Mode B** operation mode (q.v. table 5.2)!

If the camera is equipped with a heating (type L or type LL), a second power supply with a separate supply protection at the „L+“ has to be available. Standardly the supply is carried out via the supply cable Ölflex® 440P (cable gland 2, q.v. figure 5.2 and 5.5). Connection assignment and supply protection according to table 5.3.

Potential/ Pin no.	Color „Ölflex 440P“ (IEC60757)	Cond. design	Voltage	Maximum power input / protection (type L)	Maximum power input / protection (type LL)
L+ / 1	BK	1.5 mm ² litz wire	+24 VDC	20 W / fuse (L+) 2000 mA -T- time lag (PTC inrush, high in- rush current!)	40 W / fuse (L+) 4000 mA -T- time lag (PTC inrush, high in- rush current!)
L- / 2	BK	1.5 mm ² litz wire	0 VDC / GND		

Tab.5.3 – Pin assignment supply cable

5.2.3 Tests prior to switching on voltage



Attention!

Prior to commissioning, all tests as indicated by the national regulations have to be executed. In addition, it is mandatory that the proper functioning of the operating device in accordance with this user manual and all other applicable regulation has been executed.



Attention!

Incorrect installation and operation of the camera may lead to a loss of warranty!



Attention!

When commissioning the camera at temperatures below 0 °C, it has to be secured that the camera is not switched-on prior to the housing heating. The PTC heating has to warm up the housing before turning on the camera. This can be realized, for example, by the means of an external time relay.

5.3 Testing of the status LED

Through the sight glass, the status LED is visible. Prior to accessing the camera via the web interface, the proper functioning of the camera should be tested. The booting process of the ExCam IP13xx can take up to one minute. Additional LEDs for checking network activities or the bandwidth are only visible when the housing is open.

The status of the applicable network camera as reflected by the LED indicators is as follows:

Status LED		
Operation mode	<i>Color</i>	<i>Comment</i>
	Green	At normal operation, a constant green light is visible Note: It is possible to configure the status LED in such a manner that in normal operation it is not illuminated or only blinks when the camera is accessed
	Yellow	It is illuminated permanently when the camera is turned on as well as when the camera is set back to default settings
	Red	In case of an activation failure the light blinks slowly
Usage of the focus assistant	<i>Color</i>	<i>Comment</i>
	Green	Focus assistant is activated. The lens is set to optimum
	Yellow	The camera was moved or an object was placed in front of the lens. Complete the focus assistant and restart it. The lens is not set to optimum
	Red	The camera was moved or an object was placed in front of the lens. Complete the focus assistant and restart it. The lens is set insufficiently

Table 5.4 – Status and control LED

5.4 Step 3: Adjusting the lens

This step is only required in case the default settings of the picture or the user settings carried out via the web interface (focus assistant, sharpness, digital zoom etc.) do not deliver the desired results. If so, the focus (sharpness) as well as the angle of view (tele) has to be readjusted. This requires opening the flameproof enclosure.

	P 1354	P 1357	P1364	P1365 (Mk II)
Lens type	Varifocal, IR-correction, CS mount, Megapixel			
Lens	DC-Blende, F1.2/ 2.8 – 8.0 mm	P-Iris, F1.2/ 2.8 – 8.0 mm	P-Iris, F1.2/ 2.8 – 8.5 mm	P-Iris, F1.3/ 2.8 – 8.0 mm
Aspherical technology	Nein	Nein	Nein	Nein
Focal distance	2.8 – 8 mm	2.8 – 8 mm	2.8 – 8.5 mm	2.8 – 8.0 mm
Horizontal angle of view	100° (wide) – 34° (tele)	92° (wide) – 32° (tele)	92.3° (wide) – 33.3° (tele)	109° (wide) – 39° (tele)
Iris control	Automatic (analog circuit included in the camera module)	Precesion automatic (Motor control included in lens, for a large depth of field and quickly changing light conditions also manually adjustable via web interface)	Precesion automatic (Motor control included in lens, for a large depth of field and quickly changing light conditions also manually adjustable via web interface)	Precesion automatic (Motor control included in lens, for a large depth of field and quickly changing light conditions also manually adjustable via web interface)
MOD (Minimum object distance)	0.30 m (wide) 1.00 m (tele)			

Table 5.5 – Lens data ¹



Information!

If not determined differently, the default setting for the ExCam® IP13xx is set to maximum sensor resolution (q.v. chapter 2.6) and low picture compression (high picture quality, high bandwidth requirement). The focus is optimized for a distance of approx. 10 m.

If desired, we customize the ExCam® IP13xx settings to reflect specific picture sizes (16:10, 16:9, 4:3) and object distances, angle of views etc. Please advise accordingly at order placement. The same is valid for passwords, user names, streaming profiles, or IP addresses etc. which can also be pre-configured

¹¹ Standard lens included in delivery. Please inquire for additionally available lenses

5.4.1 Work preparation



Attention!

Please carry out any preoperational work carefully and in accordance with the applicable regulations.



Attention:

Note: Depending on the zone classification, it might be necessary to obtain a work permit/clearance! When adjusting the camera settings potentially explosive atmosphere must be avoided by any means!

Please consider that in order to carry out the applicable settings, a feedback regarding the picture quality is required. Please use appropriate devices (laptop, CCTV tester, walkie-talkie to the control room)

- Use appropriate tools
- Make sure you have a secure foothold
- Avoid static charge

5.4.2 Opening the pressure-resistant housing

In case it is necessary to adjust the picture, the pressure-resistant housing has to be opened and, after completion of the work, securely tightened again. Please be very careful and follow thoroughly the steps of this manual.



„WARNING – DO NOT OPEN IN HAZARDOUS AREA“

Note: Depending on the zone classification, it might be necessary to obtain a work permit/clearance! When adjusting the camera settings, potentially explosive atmosphere must be avoided by any means!

If the T08 ExCam IP13xx is equipped with a protection roof it has to be removed first. To do so, loosen the applicable 4 screws situated on the both ends of the brackets (figure 5.8).

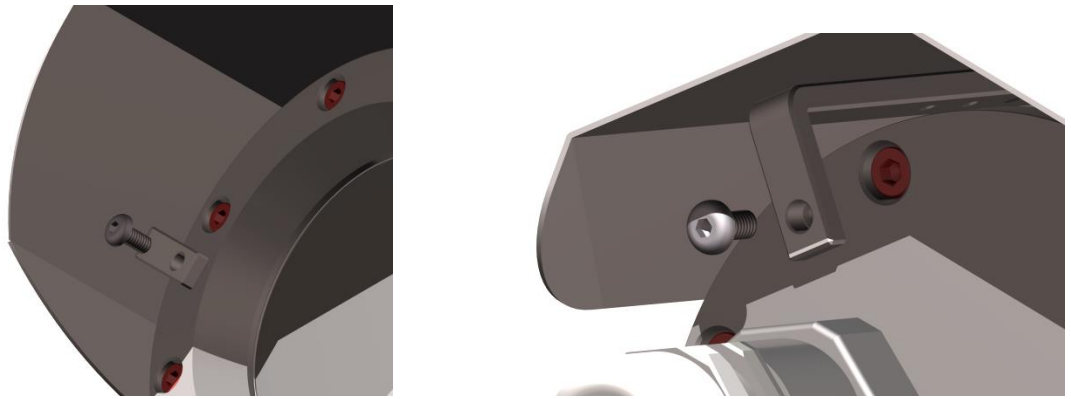


Figure 5.8 – Removing the protection roof (1/2)

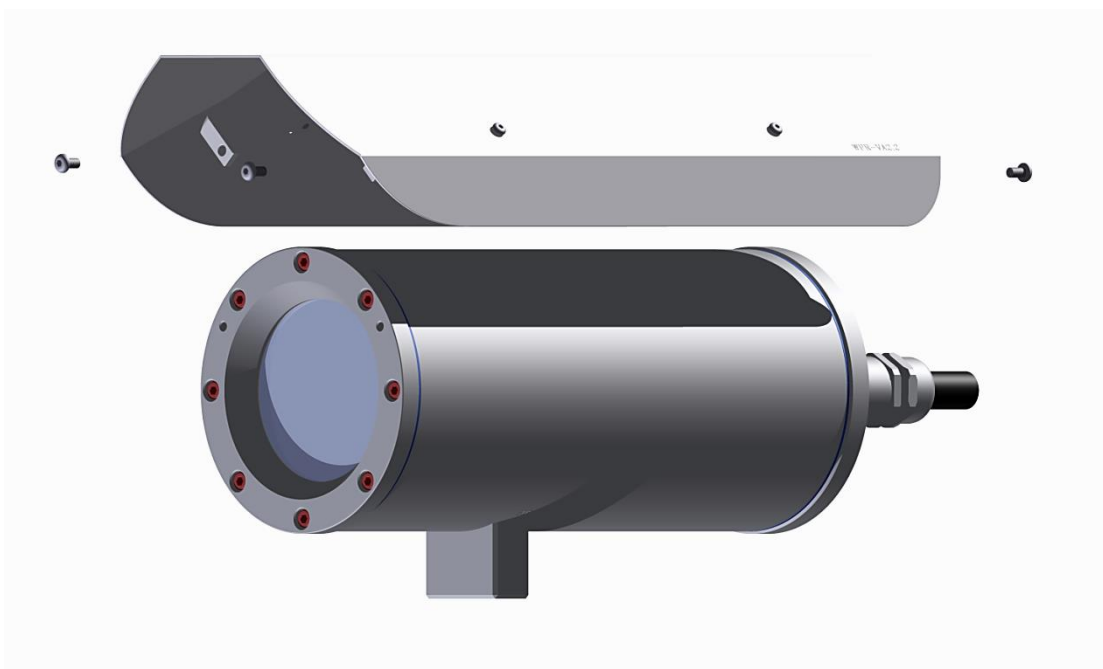


Figure 5.9 – Removing the protection roof (2/2)

To open the enclosure (T07 VA2.2) of the ExCam IP13xx Series, loosen the four hexagon socket screws (DIN 912/ ISO 4762) located at the cable gland flange of the stainless steel housing, including the washer springs (DIN 127 A) (q.v. figure 5.10). Avoid skin or clothing contact with the screw threads as they dispose of LOCTITE ® 243™ (chemical basis: Dimethacrylatester). It is used to protect the screws from loosening due to shocks, vibrations but it is also used for sealing purposes. It is not allowed to open the sight glass flange!

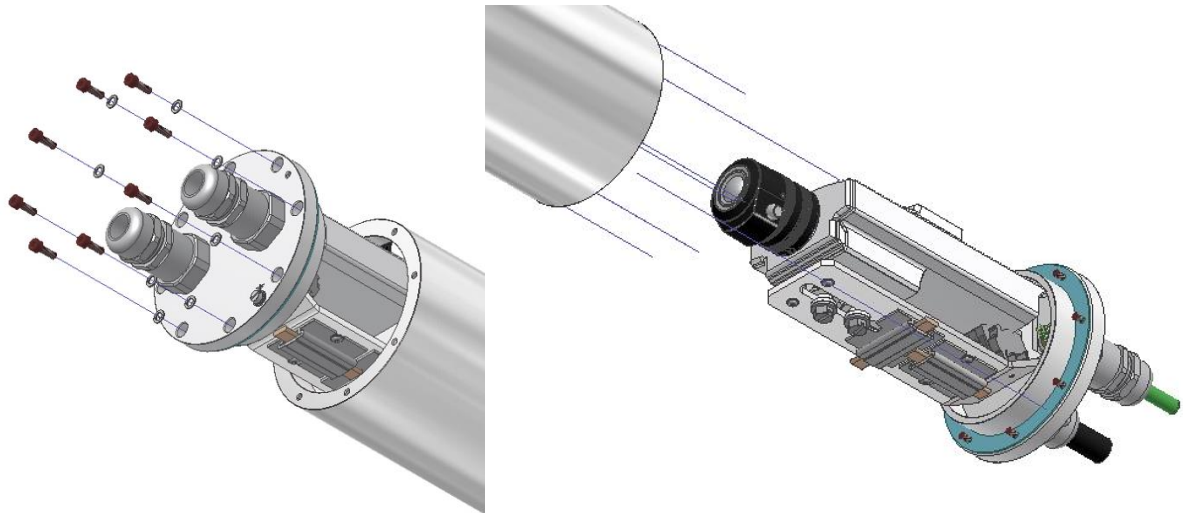


Figure 5.10 – Opening the ExCam IPxxx

Pull out very carefully the lead flange in a straight manner, ensuring that the board module does not tilt. Due to the created lower pressure, this might require some additional effort. The cylindrical clearance fit (H8f7 - DIN ISO 286) of the body as well as flange components must not be tilted as this runs the risk of damaging the flame proof gap preventing the transmission of ignition (DIN EN 60079-1:2012)!

Attention: The mounting adapter with the PTC heating module, the camera module, and the optical module as well as the CB06 temperature controller and, if applicable, auxiliary relays and terminal blocks, are fixed to the cable gland flange. Beware also of tilting and work very carefully to avoid damaging the components! Avoid skin and clothing contact with the cylindrical fit, the surface is treated with lubrication paste (oleaginous) to protect the surface against frictional corrosion and mechanical strain.

When opening the housing, make sure not to damage or to pollute the GYLON® flat sealing (bluish, RAL 5012)! The flat sealing is not firmly attached to the cable and supply flange and only fixed by the means of the screw connections.



Attention!

Beware not to damage the surface of bore hole and shaft (fit) at the flame proof gap preventing the transmission of ignition.



Attention!

Please make sure not to damage housing sealings and to keep them clean

5.4.3 Adjusting the focus and angle

The default focus of ExCam IP13xx network camera is set to an object distance of approximately 10 m; the angle is set to the maximum wide range. Depending on the individual camera module, this angle can range between 92° - 109°. Usually it is not necessary to carry out any adaptations. For focusing objects located closer or further away or to change the zoom settings (wide -> tele), the settings can be adjusted as follows:

1. Via the web browser (Mozilla Firefox, MS Internet Explorer etc.), please open the user interface of the ExCam IP13xx (q.v. chapter 6 „web browser access“).
Navigate through the „Setup“ menu via the „Basic Setup“ to the „Focus“ settings
2. Please follow the instructions and start by clicking on the “Open iris” button. If the button is deactivated (greyed out) the aperture is already open
3. Now click on the „Reset“ button in order to reset the focal lens to default value
4. Loosen the zoom as well as sharpness control at the lens by turning counter-clockwise. Move both controllers and adjust the zoom as well as the sharpness as required. Check the picture quality in the window below
5. Tighten the zoom as well as sharpness control again
6. Within the configuration menu, click afterwards on the button „Fine-tune focus automatically“ and wait until the automatic optimization is completed
7. To activate the aperture again, click on “Enable iris“. If the button is deactivated (greyed out) the aperture is already activated
8. If necessary, additional adjustments can be carried out at the tab „Advanced“

Note:

Prior to starting the automatic fine adjustment, adjust the sharpness as precisely as possible by the means of the sharpness control or the focus assistant. The sharpness controller usually provides the best results.



Abb.5.11 – Mounting adapter with installation components



Figure 5.12 – Mechanical adjustments at the lens

5.4.4 Extracting/inserting an SD storage card

The ExCam IP13xx disposes of a slot for a microSDHC storage card. Saved video files can be viewed or deleted via the web interface; they are also available in a download list or as an ftp file to the network. The videos saved on the storage card can be accessed also via the FTP server within the network.

If the SD card has to be changed, the new storage card should be blank and pre-formatted with an ext4 or vFAT data system. The SD card slot is located on the bottom side behind the camera module (q.v. figure 5.13).

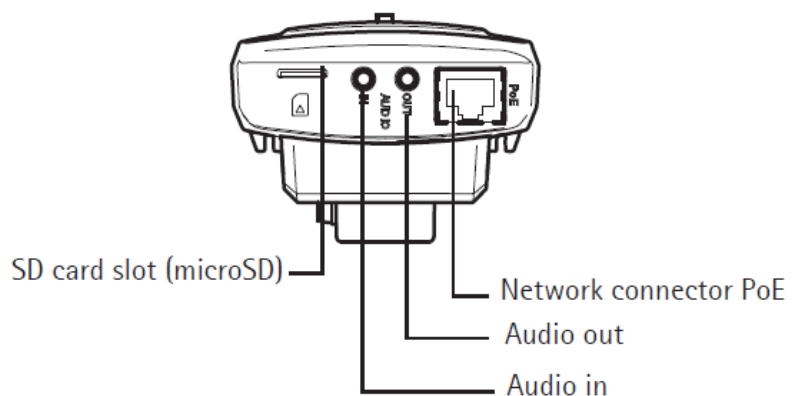


Figure 5.13 – microSD card slot

Please pay attention when inserting / extracting the storage card. Do not damage the connection cable, terminals, or the CB06 circuit board! Do not bend the aluminum mounting adapter as otherwise the optical axis of the equipment and hence the picture quality is not guaranteed anymore!



When touching electrical components, potential equalization (grounding of the body) has to be observed (ESD clothing, PE wristband etc.)!

5.4.5 Hardware Reset

In order to reset all parameters, including the IP address, of the ExCam IP135xx Series to the default settings, a hardware reset has to be carried out.

It is possible to reset the parameters either via the web interface or manually. If the camera cannot be accessed anymore via the network or is in an uncontrollable state, the reset has to be done manually. To do so, please follow the steps below:

1. Disconnect the camera module (Axis P13xx) from power
2. Press the control button 9 (q.v. figure 5.14); simultaneously switch-on power (PoE)
3. Keep the control button pressed until the status light 6 (Abb.6.14) blinks yellow, this may take up to 30 seconds
4. Release the control button. As soon as the status light is green, the camera module Axis P13xx has been reset to Axis default settings. This may take up to one minute. If no DHCP Server is available within the network, the IP address is 192.168.0.90 (subnet masking 255.255.255.0).
5. Now, IP address and password can be re-assigned. If the hardware reset was not successful or if the cameras still does not work properly anymore, (faulty browser visualization, picture freezing, control functions are not carried out, the system generally displays slow response times etc.), please re-install the applicable firmware or carry out an update (qv. chapter 5.4).

5.4.6 Closing of the pressure-resistant housing

For closing the housing, please follow, in reversed order, the steps described in the chapter 5.4.2 regarding the opening of the housing. Do not use any other screws than those which are part of the delivery scope. For the execution with a „K1“ cable gland, 8 x cylinder head screws M4 x 0.7 (ISO metric right-hand thread) with a thread length of 12 mm (DIN 912/ ISO 4762, quality 6g) are used. The material of the screw connections correspond to the housing of the stainless steel housing (MNo. 1.4404, AISI 316L)

For the execution with a „K2“ cable gland, 7 x cylinder head screws M4 x 0.7 (ISO metric right-hand thread) with a thread length of 30 mm are used.

Prior to closing the housing, please check thoroughly that the bore holes and flameproof joint (cylindrical fit) are clean and intact.

**Attention!**

In case the flameproof joint has been damaged mechanically, the housing must not be used anymore!

**Attention!**

Do not lock-in any foreign objects inside the housing

Please make sure that the disassembled screw locks (washer spring DIN 127A) are re-assembled.

The bluish Gylon® flat sealing must be intact and has to be reassembled according to the hole-pattern of the flange. There is no restriction regarding its installation direction.

If, when closing the housing, it is noted that the surface of the flameproof joint is dirty or not lubricated sufficiently, please clean and degrease it with a clean cloth and suitable cleaning detergent. Afterwards, re-lubricate it with a suitable lubrication agent (e.g. Molykote® P-40 paste for standard applications or special lubrication agents such as OKS 403 for seawater environments)

The screw connections of the flange and housing have to be tightened in crosswise sequence with a torque of **3 Nm**. Please avoid extensive tightening – this might lead to a torn screw etc., affecting improperly the enclosure's pressure resistance (Ex).

If the camera does not provide the anticipated results, steps 5.4.2 to 5.4.5 have to be repeated.

For the fixed installation of the ExCam IP13xx Series, either with a wall mount bracket, with a hinge attachment for sight-glass installations or for the optional installation of a roof, please observe the instructions of the EX installation manual!

The T08 ExCam Series is certified to be also used for mobile applications (hand-held etc.)



The cylinder head screws for the safe connection of the housing body and the flange have to be tightened with a torque of 3 Nm! Always tighten the screws in a crosswise sequence!

6 Network access and visualization

The following steps describe the most important steps for the initial commissioning of the camera. The configuration menu of the web surface allows an intuitive navigation and offers several configuration possibilities. For a comprehensive user manual of the web surface, please refer to the to the Axis user manual which can be found on the provided storage medium or which can be accessed at:

ExCam IP1354 http://www.axis.com/de/files/manuals/um_p1354_51348_en_1303.pdf

ExCam IP1357 http://www.axis.com/de/files/manuals/um_p1357_49958_en_1303.pdf

ExCam IP1364 http://www.axis.com/files/manuals/um_p1364_1510439_en_1601.pdf

ExCam IP1365 http://www.axis.com/files/manuals/um_p1365mkii_1489706_en_1604.pdf

Network access of the ExCam IP13xx Series is supported by most operating systems and browsers. The recommended browsers are Internet Explorer with MS Windows, Safari with Macintosh and Firefox with Windows and additional operating systems.

To carry out „video streaming“ via the Microsoft Internet Explorer, installing the “AXIS Media Control” (AMC) is required. The installation request is executed during the initial commissioning. In order to visualize the „H.264“ video streams, QuickTime™ is recommended. For „Motion JPEG“ coded video streams, Java Applet is suggested which requires JVM (J2SE) 1.5 or higher, or JRE (J2SE) 5.0 or higher.

At delivery, the ExCam IP13xx is set to the applicable net frequency (50Hz or 60Hz). If the camera is used at a location with a differing net frequency, a flickering of the picture might be noticeable, particularly in surroundings with fluorescent tubes. In such a case, the applicable settings have to be carried out within the menu “System Options > Advanced > Plain Config”, requiring a system restart.

6.1 Browser Support

A list with the currently supported web browsers, operating systems, and required add-ons can be viewed at:

http://www.axis.com/techsup/cam_servers/tech_notes/browsers.htm

6.2 Assigning the IP address

The ExCam IP13xx is an Ethernet network camera requiring an IP address to access it. Usually a DHCP server is integrated in most networks which automatically assigns an IP address. In case there is no DHCP server available in the network, the ExCam IP13xx's default address "192.168.0.90" (subnet masking 255.255.255.0) is used.

With the "AXIS IP Utility" tool it is possible to determine the IP address with Windows; the included storage medium contains this application. It is also available for download:

<http://www.samcon.eu/downloads-ex-videokameras-atex/download-treiber-software/>



In case it is not possible to assign the IP address, it might be necessary to change the firewall settings!

The "AXIS IP Utility" tool automatically recognizes all ExCam devices and displays them. It can also be used to manually assign a static IP address. Please note that the ExCam IP13xx network camera has to be installed within the same network segment (physical subnet) as the computer on which the "AXIS IP Utility" tool is executed. For example, the ExCam IP1365 network identification is „Axis P1365“ (q.v. figure 6.1). The MAC address as well as the serial number are also determined and displayed so that a non-ambiguous identification is possible. The network name (host name) of the network camera (web server) can be changed as desired by the user (max. 64 characters).

ExCam IPQ6045	→	AXIS Q7401 - 00408CA1BE19	89.0.0.99	00408CA1BE19
		Show room - ExCam miniZoom (left monito...	89.0.0.46	00408CCC0845
		AXIS Q6045 Mk II - ACCC8E4F7C6F	89.0.0.203	ACCC8E4F7C6F
		AXIS 243SA - 00408C9DFF01	89.0.0.98	00408C9DFF01
		Outdoor - Bus stop - Axis P1346	89.0.0.152	00408CD65BF8
		Show room - ExCam IPQ6045	89.0.0.201	00408CF5BB5C
ExCam IP1365	→	AXIS P1365 - ACCC8E29187A	89.0.0.107	ACCC8E29187A
		Test06 Axis Q1765-LE	89.0.0.108	00408CEC8A61
		Test13 ExCam IPQ1755	89.0.0.115	00408C8F18E9
		Hall - Axis 233D	89.0.0.122	00408C82E5C1

Figure 6.1 – Axis IP Utility

6.3 Password / identification

The default user name is: **root**

The default password is: **root**

When a system reset of the equipment has been carried out, please follow the instructions below:

In order to allow access to the camera, the password for the standard administrator user „root“ has to be determined. When accessing the camera for the first time, the dialog field „Configure Root Password“ is displayed and the password can be determined there. For security considerations, it is possible to use an encrypted HTTPS-connection requiring an HTTPS certificate (see steps below).

For assigning the password via a standard HTTP connection, please just enter the password directly in the dialog window „Configure Root Password“.

For using an encrypted HTTPS connection when determining the password, please follow the below steps:

1. Click on the button „Create self-signed certificate“
2. Enter the desired information and click „OK“. The certificate is issued and the password can be entered. Please note that the entire data transfer of the ExCam IP13xx will be encrypted
3. Enter the desired password and repeat it in order to ensure correct spelling. Click on „OK“ to configure that password
4. Enter the username „root“ (it is not possible to delete the default administrator user name „root“)
5. Enter the previously determined password and click on „OK“. In case you have forgotten the password, the ExCam IP13xx has to be reset to default settings
6. Click on „Yes“ in order to install AMC (AXIS Media Control). After the completion of the installation, it is possible to view the video streams with the Microsoft Internet Explorer or Mozilla Firefox (administrator rights are required)
7. The page „Live View“ of the ExCam IP13xx is now displayed. With the setup link it is possible to open the menu options to allow personal camera settings

7 Maintenance / Servicing / Alterations

The national regulations concerning the maintenance and servicing of electrical devices within hazardous areas are to be observed.

The required maintenance intervals are specific to the individual devices. The operating company has to determine these intervals depending on the application parameters. During maintenance, focus has to be put on checking parts concerning the ignition protection category such as the integrity of the housing, the sealings and the cable glands. If maintenance measures are necessary they have to be initiated and/or executed.

8 Repairs and Maintenance

Repairs must only be carried out with original parts of SAMCON Prozessleittechnik GmbH. Damaged pressure-resistant housings have to be replaced completely. If in doubt, return the applicable part to SAMCON Prozessleittechnik GmbH.

Repairs concerning the explosion protection must only be carried out by SAMCON Prozessleittechnik GmbH or a qualified electrical technician authorized by SAMCON Prozessleittechnik GmbH in accordance with nationally applied regulations. Rebuilding of or alterations to the devices are not permitted.

9 Disposal / Recycling

When disposing of the device, nationally applicable regulations must be observed.

This document is subject to alterations and additions.

10 Drawings

Attention: The technical drawings show T08 ExCam IP13xx cameras and integrated pressure barrier within the cable gland (compound grouting of the single conductors). The design shows the maximum dimensions! For cable glands with elastomer sealing of the outer sheath the dimensions in the depth is reduced by 30 mm!

T08-VA2.2.K1.BOR-C-XXX-X-L(L)

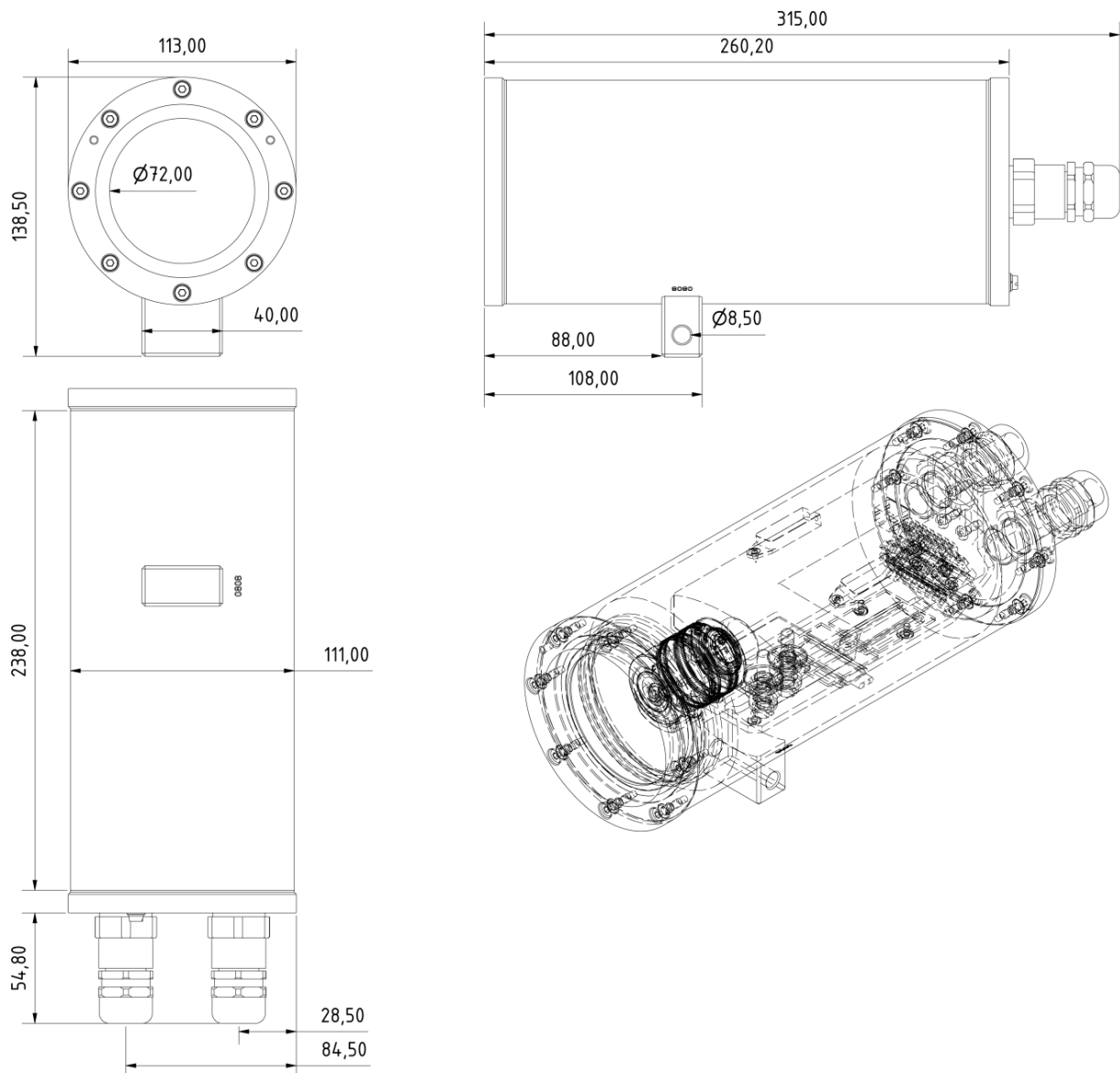


Figure 10.1 – Dimensions of the T08 ExCam IP13xx with K1 flange

T08-VA2.2.K2.BOR-C-XXX-X-N

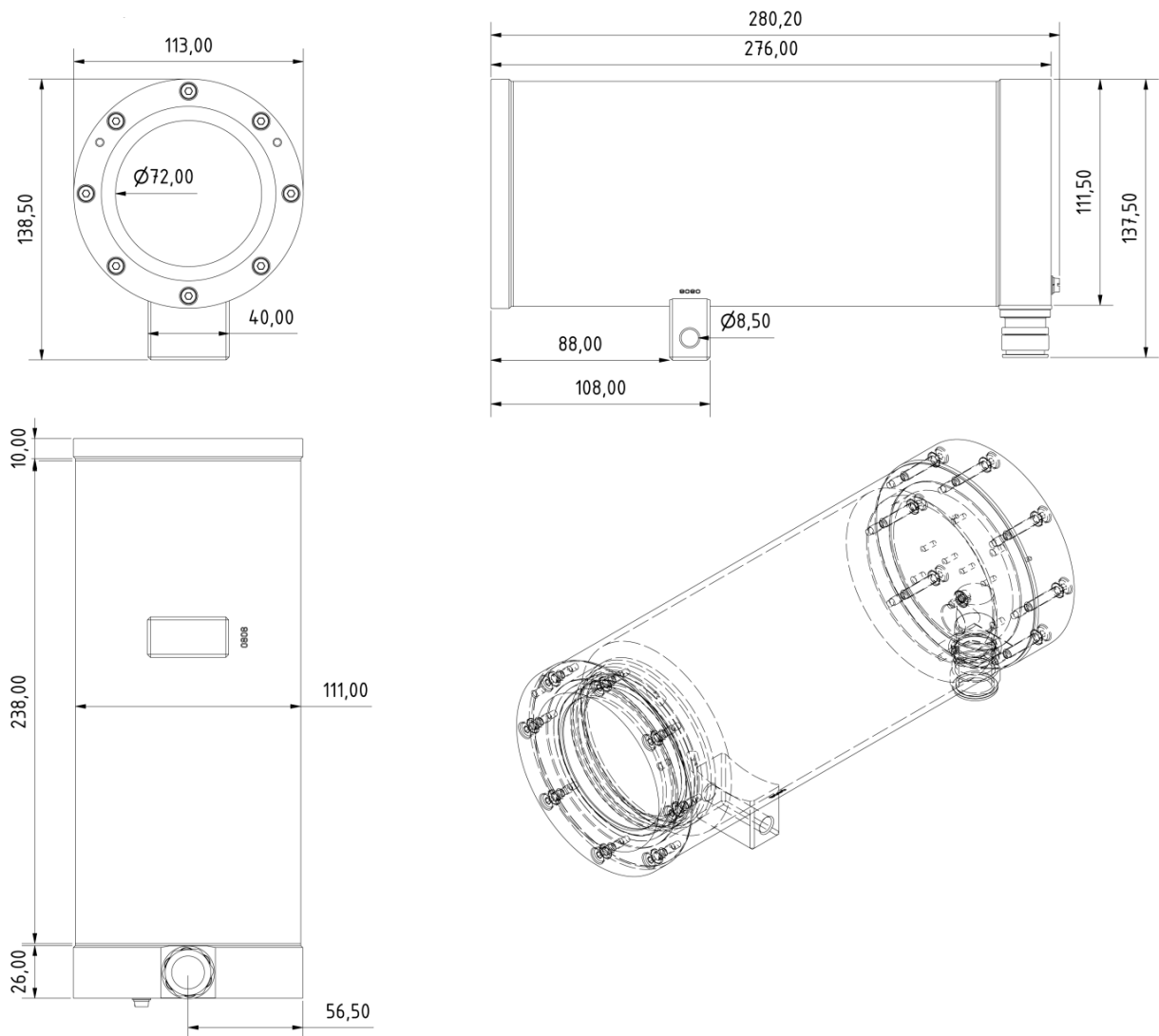


Figure 10.2 – Dimensions of the T08 ExCam IP13xx with K2 flange

T08-VA2.2.K1.BOR-C-XXX-X-L(L) with accessories

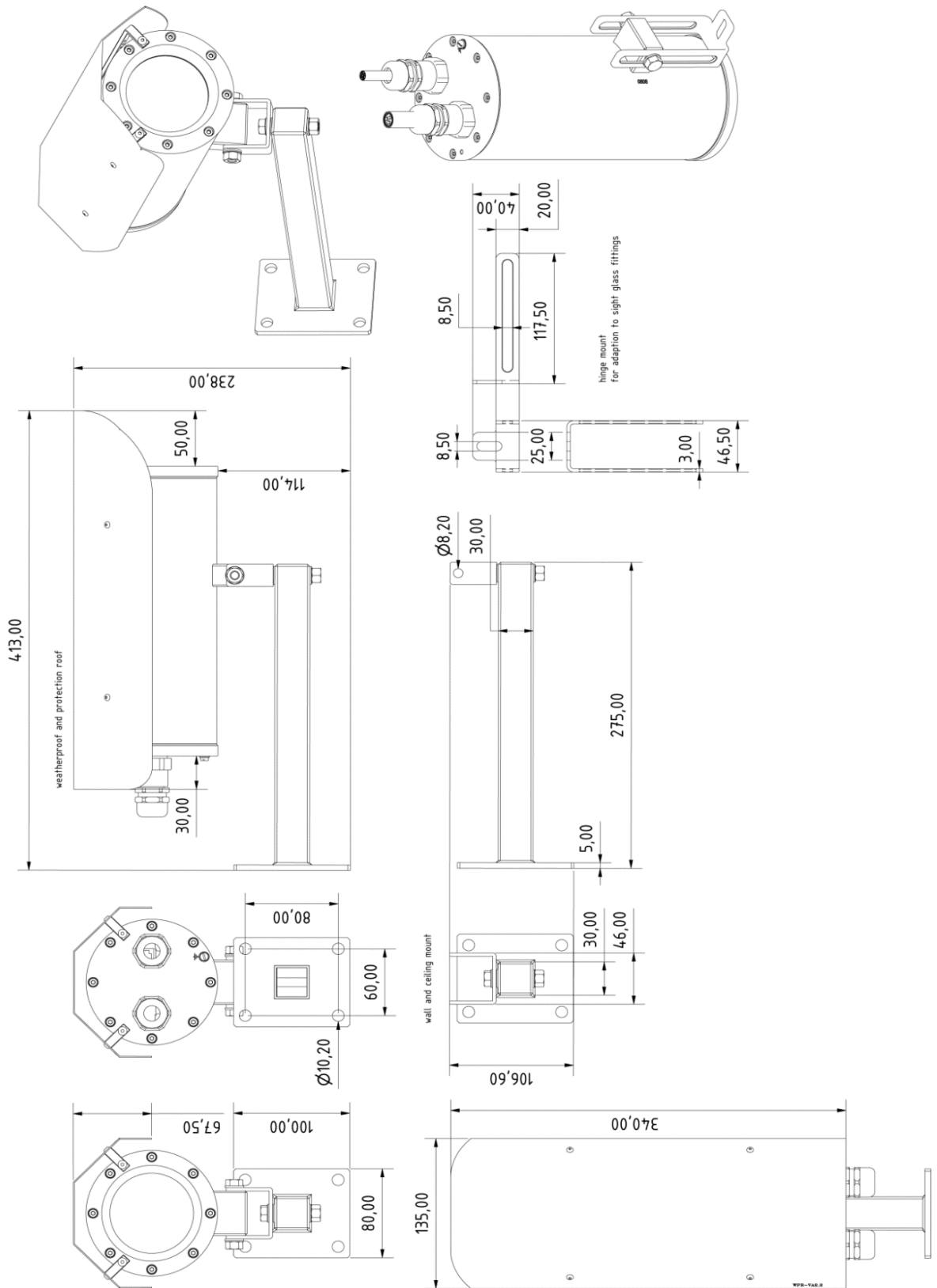


Figure 10.3 – Dimensions of the T08 ExCam IP13xx with accessories

11 Notes



design: carson.grey@liquiverse.com
printed in germany



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