

ExCam[®] XF Q1645

User Manual



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1 Introduction

The ExCam XF Q1645 is a powerful mega-pixel IP camera (2-mega-pixel resolution). It is certified by ATEX, IECEx, EAC-Ex and IA. The camera has a **high-definition television resolution (1920x1080 with 100/120 images/s)** and is equipped with a **powerful remote zoom and remote focus lens**.

The ExCam series is certified both in accordance with the European (ATEX) and international directive (IECEx). The explosion-protected housing is approved for the ATEX group II for zones 1, 2, 21 and 22 including the explosion groups IIC / IIIC. To see other approvals, please visit our website at www.samcon.eu/en

When designing the ExCam XF Q1645, we attached a very high importance to safety, mechanical precision and high quality of stainless steel.

2 Technical data

2.1 Explosion protection

Identification marks

Model key:	T08-VA2.3.K3.BOR2-LL.H-005.A-T
acc. to Directive 2014/34/EU:	 II 2G (zone 1 and 2)  II 2D (zone 21 and 22)

Explosion protection (gas):	Ex db IIC T5 Gb
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Explosion protection (dust):	Ex tb IIIC T95°C Db
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Protection class:	IP 68 (IEC /EN 60529)
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Transport/storage temperature:	0°C...+40°C
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Ambient temperature (EX):	-60°C...+60°C
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Named testing laboratory:	TÜV Rheinland (number 0035)
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EU type approval certificate:	TÜV 18 ATEX 8218X (2018)
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IECEx Certificate of Conformity:	TUR 18.0023X (2018)
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EAC-Ex TUR Report:	TC RU C-DE.A5.61.B.00381/19
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Other certificates see:	https://www.samcon.eu/en/products/network/excam-xf-q1645/
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2.2 Electrical parameters of the camera

Supply of 24 V DC for the heating:

Voltage supply:	22 V DC < U_{in} < 26 V DC
Power consumption:	Approx. 40W @ -60°C (depends on temperature)

Power supply of the camera via Ethernet (PoE):

Voltage supply:	PoE, IEEE 802.3af/802.3at type 1 class 3
Reference voltage:	+48 V DC (44...54 V DC)
Maximum power consumption:	9.1 W
Typical power consumption:	4.5 W

2.3 Connection cable Ex-d - Ex-e (ASKDP03-T)

Description:	Data transfer and power supply of the camera module (compliant with DIN EN 60079-14)
Jacket colour:	Green (GN), similar to RAL3001
Outside diameter:	17.00 ± 0.5 mm
Bending radius:	10 x D_a when installed and 5 x D_a after relocation
Data line:	4 x 2 x AWG22/1 CAT.6a
Performance elements:	3G1.5 (BK-BU-GN/YE)
Properties:	PUR halogen-free, flame-retardant, UV-resistant, chemical resistance, shielded (see www.samcon.eu)

Quick link:

https://www.samcon.eu/fileadmin/documents/en/60-Assembling%26mounting/ASKDP03-T_Datasheet.pdf

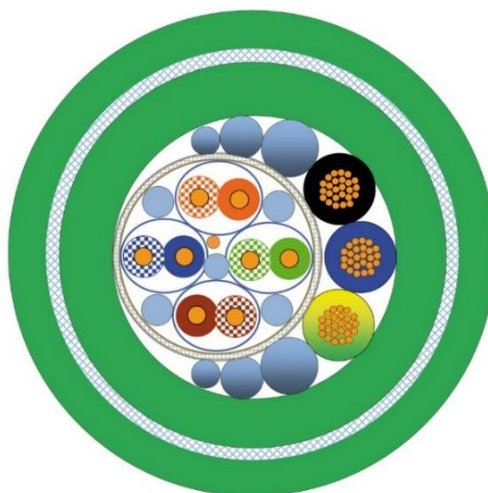


Figure 2-1 Sectional view of ASKDP03-T

2.4 Video-technical characteristics

We use the AXIS Q 1645 Network Camera in a pressure-resistant enclosure. For details, please refer to the Product Documentation, video-technical data of AXIS®:

<https://www.axis.com/products/axis-q1645>



2.5 Other technical data

	Camera (Ex-d)	Terminal box (Ex-e)
Permissible ambient temperature	0°C ... +60°C (for PoE power supply) -60°C ... +60°C (In the event of additional 24 V DC power supply)	-60°C ... +55°C
Protection class as per EN 60529/IEC 529	IP68 (Test conditions: 24h/3m water column 5°C)	IP66
Housing material	stainless steel, mat. no. 1.4404	polyester resin
Weight	about 11 kg	about 1 kg
Dimensions	D113mm x 310mm	145mm x 145mm x 71mm

Table 2-1. Other technical data

3 Safety Instructions

Please absolutely observe the installation instruction's safety directions of the T08 ExCam series!



Quick link:

<https://www.samcon.eu/fileadmin/documents/en/22-Ex-Network-Cameras/ExCam-Series-T08-EX-Installation-Manual-2018.pdf>

It is absolutely mandatory to adhere to the national safety regulations and regulations for prevention of accidents, as well as to the safety instructions given below in this User Manual!



Attention!

Cameras of type T08 ExCam are not suitable for use in zones 0 and 20. The ambient temperature, temperature class and explosion group written on the enclosure nameplate must be absolutely adhered to! The customer is not allowed to make any alterations of the camera! The camera must be operated in a proper and sound condition and only in the way intended.



Attention!

Repairs may only be carried out by using original parts from the manufacturer. Repairs which affect the explosion protection may only be carried out in accordance with the nationally applied regulations and exclusively by the manufacturer.



Attention!

Prior to installation, take external sources of heat or cold into account! The temperature ranges prescribed for storage, transport and operating must be adhered to!



Attention!

Adhere to the warnings given on the nameplate:

“WARNING – DO NOT OPEN IN HAZARD AREAS“

“WARNING – DO NOT OPEN WHILE ENERGIZED“



Using the camera in explosion-protected areas with regard to temperature and dust layers is defined in the respective national regulations.



When installing the ExCam, adhere to the requirements of the EN/IEC 60079-14.

4 Installation

For commissioning and operating the camera, the relevant national regulations, as well as the generally accepted rules of technology shall prevail. Before mounting the camera, thoroughly check it for any transport damage, especially on the housing and cable. Installation, electrical connection and the first start must only be carried out by qualified specialists.

Work preparation:



Attention!

Prepare your work carefully and in accordance with the relevant regulations.



Attention!

Depending on classification of hazard areas, it is imperative to obtain a work approval first!

When you open the pressure-resistant enclosure under voltage, it is absolutely necessary to prevent potentially explosive atmosphere!

To ensure the best image quality delivered by the network camera, plan the installation site carefully (consider light conditions, object distance or size, angle and minimum object distance to the focus).

- Use appropriate tools and aids.
- When working, ensure a safe stand.
- Make sure that any static charge is avoided.



Attention!

Please observe the national security, installation and accident prevention regulations (e.g. DIN EN 60079-14) and the safety instructions in this User Manual, as well as the ones in the Installation Guidelines!



Attention!

Adhere to the provisions of the IECEx, ATEX and EX installation instructions for mounting and starting up!

The ExCam[®] XF Q1645 consists of a flame-proof camera housing (Ex-d) and a terminal box of a high degree of safety (Ex-e). Both units are connected via a reinforced 5 m cable. Mount the camera according to the desired field of view. Install the terminal box so that a good accessibility is provided, in order to facilitate electrical connection.



Attention!
 Please pay attention to the national and local regulations for mounting heavy loads. In case of doubt, take appropriate security measures.

Drawings for drill hole patterns and further information can be viewed on our product page:

Quick link:

<https://www.samcon.eu/en/products/network/excam-xf-q1645/>



Optional mounting accessories

Wall bracket WMB-...		WALL MOUNT EXCAM XF (01569-001) Wall bracket for devices of T08-VA2.3 series Suitable for hanging the camera on walls. Material: stainless steel 1.4404 Load bearing: 45 kg Dimensions: 445 x 140 x 185 mm
Pole adapter PMB-...		WALL MOUNT EXCAM XF (01570-001) Pole adapter for VA wall mount Material: stainless steel 1.4404 Suitable for pole diameters between 50 and 105 mm Load-bearing capacity: 45 kg Dimensions: 120 x 180 (x 130 bei Mast Ø 60 mm)

Table 4-1 Mounting accessories

5 Electrical connection



Attention!

The electrical connection of the equipment may only be carried out by qualified and skilled personnel!



Attention!

It is absolutely necessary to ground the ExCam[®] series' housing via the PA connection.



Attention!

Please observe the national security, installation and accident prevention regulations (e.g. DIN EN 60079-14) and the safety instructions in this User Manual, as well as the ones in the Installation Guidelines!

The delivered ExCam[®] XF Q1645 is equipped with an electrical connection cable of the type ASKDP03-T. The maximum transmission range from the camera to the next active network interface is 100 meters and can be individually specified by the client. The user is NOT authorised to do electrical connection procedures inside the pressure-resistant enclosure.

5.1 Potential equalization

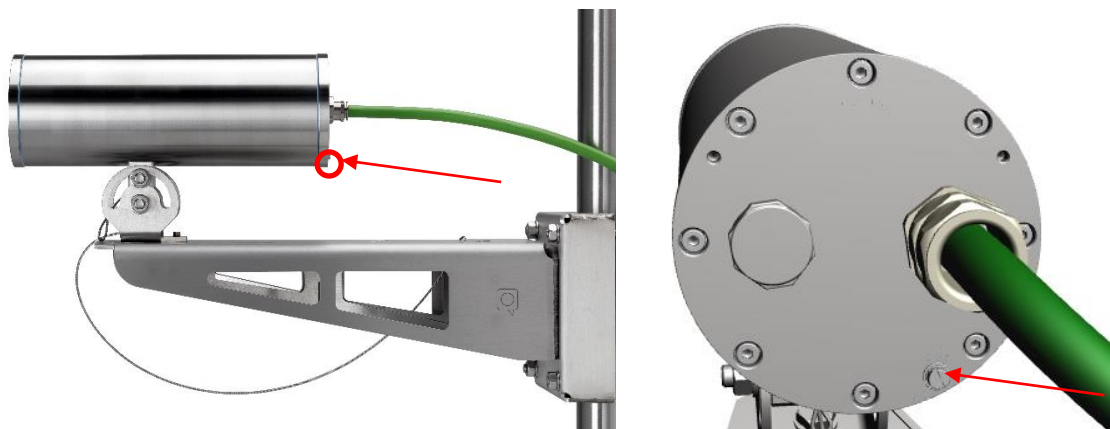


Figure 5-1 ExCam XF Q1645 Potential equalization

Potential equalization/grounding of the camera housing is absolutely necessary, in order to avoid static charges and thus the formation of sparks. For this purpose, a screw terminal is provided at the rear side, at the bottom (right) (see Figure 5-1). The cross-section of the potential equalization should comply with the National Ground Rules (at least 4mm²).

Wiring table:

Potential	Colour (IEC 60757)	Cross-section	Comment
PA	GN/YE	4 mm ² (rigid)	Terminal: Slotted screw M4x0.7 (DIN 84) with washer Ø9mm (DIN 125A), Keep 3 Nm tightening torque!

Table 5-1 Potential equalization

5.2 Connection work at the device (terminal box) and fuses

Supply of 24V DC for the heating

Voltage supply:

22 V DC < U_{in} < 26 V DC

Power consumption:

Approx. 40W @ -60°C (depends on temperature)

Power supply for the camera (PoE)

Voltage supply:

PoE, IEEE 802.3af/802.3at type 1 class 3

Reference voltage:

+48 V DC (44...54 V DC)

Maximum power consumption:

9.1 W

Typical power consumption:

4.5 W



Attention!

Connect the device the electric mains exclusively via the box ExTB-3 terminal!



Attention!

Never open the Ex-e terminal box under voltage!



Attention!

Adhere to the international installation regulations for connection chambers with increased safety (Ex-e).



Attention!

Adhere to attached separate User Manual for the Ex-e terminal box.



Figure 5-2 Camera (Ex-d) and terminal box (Ex-e)

Video Tutorial:

Observe our video tutorial:

“SAMCON 01 Wiring the cable SKDP03-T to the junction box ExTB-3”
<https://go.samcon.eu/v01>





Figure 5-3 Video Tutorial ExTB-3

The pin assignment of the ASKDP03-T is executed in accordance with the standard EIA/TIA-568B for 100BaseTX and 24VDC, as follows:

Camera (Ex-d) (T568B)	Colour ASKDP03-T (IEC60757)	Terminal ExTB-3	Cross- sectional surface	Comment
Reinforcement	YE / GN	PE	2.5 mm ²	Flex
Tx+	WH / OG	1	0.32 mm ²	Solid conductor
Tx-	OG	2	0.32 mm ²	Solid conductor
Rx+	WH / GN	3	0.32 mm ²	Solid conductor
Rx-	GN	4	0.32 mm ²	Solid conductor
(PoE +48 VDC)	WH / BU	5	0.32 mm ²	Solid conductor
(PoE +48 VDC)	BU	6	0.32 mm ²	Solid conductor
(PoE GND)	WH / BN	7	0.32 mm ²	Solid conductor
(PoE GND)	BN	8	0.32 mm ²	Solid conductor
GND/SHD	YE / GN	PE	2.5 mm ²	Flex
L+	BK	9	1.5 mm ²	L+ 24VDC
L-	BU	10	1.5 mm ²	L- 24VDC
PE	YE / GN	PE	1.5 mm ²	PE

Table 5-2. Wire assignment of terminal box ExTB-3

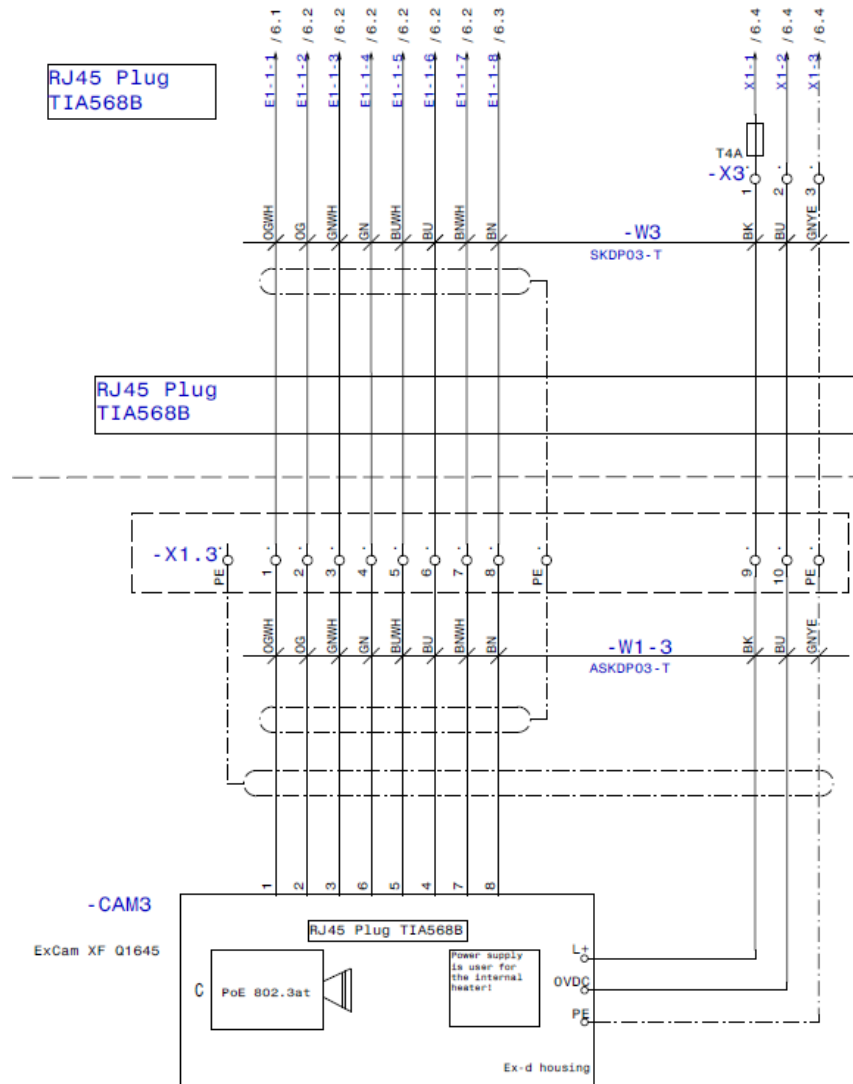


Figure 5-4 Sample circuit of terminal box ExTB-3

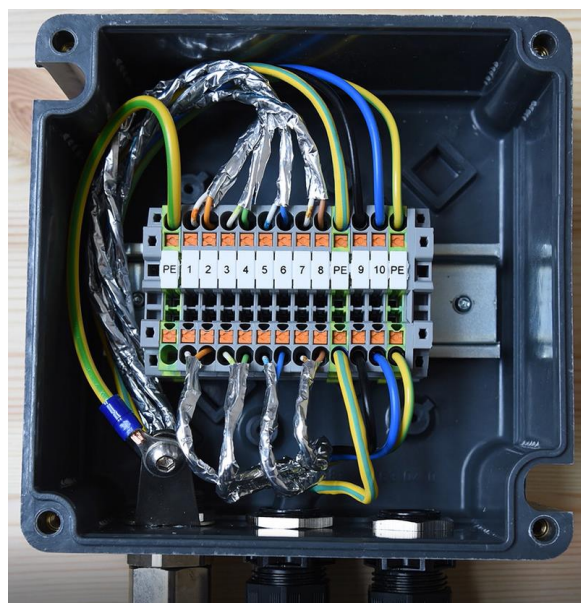


Figure 5-5 Photo of the wired terminal box ExTB-3



Attention!

Introduce the foiling up to about 15 mm close to the terminals, in order to prevent alien crosstalk. Make sure that the foiling cannot cause any short circuit of the data pairs!



Attention!

Bring the twisted pair composite up to about 10 mm close to the terminals, in order to ensure interference immunity.



Attention!

Use only terminals approved by SAMCON.



Attention!

Finally, check your network installation with a Class-D Link Test.

5.3 External connection and protection

There are several options of routing the ExTB-3 terminal box to a safe area:

5.3.1 Direct routing from the ExTB-3 into the safe area

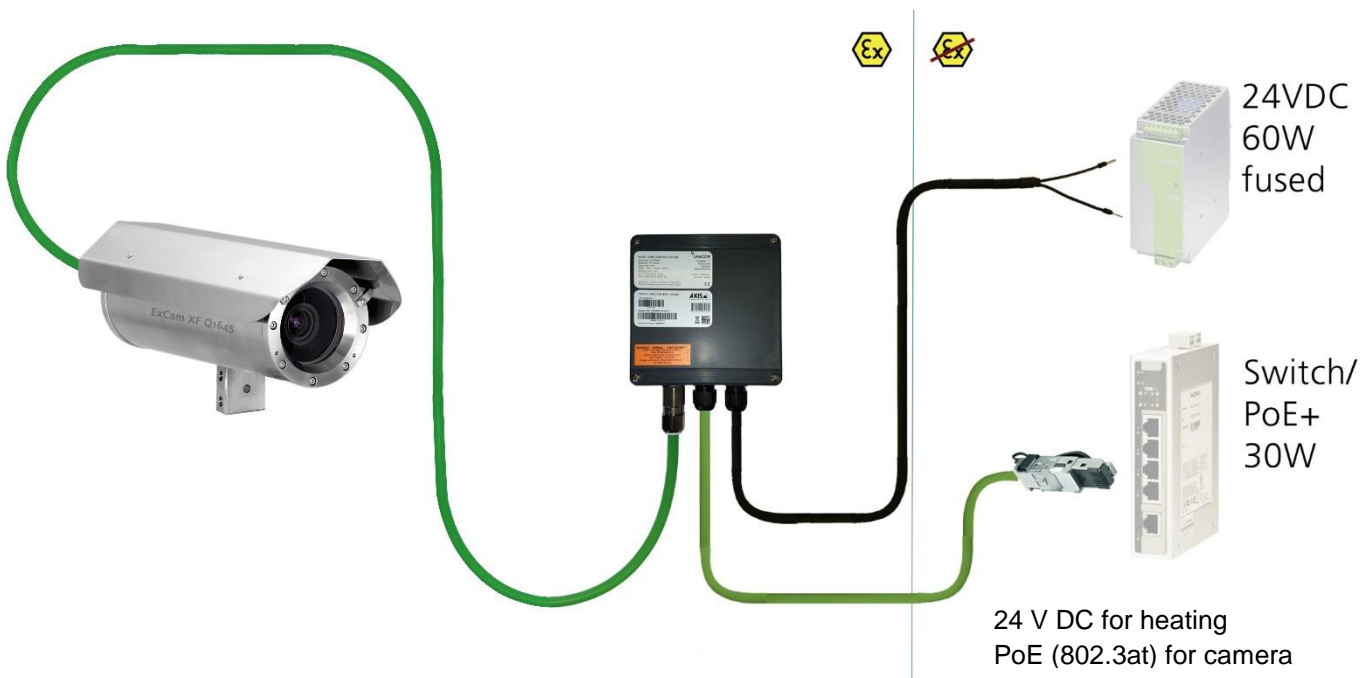


Figure 5-6 ExTB-3 -> Safe area

In the case of direct routing from ExTB-3 to the safe area, the power supply and the voltage signal are led from the safe area to the terminal box. Please observe the terminal box assignment, as described above.



Attention!
Cables and wires must comply with the requirements of the IEC 60079-0/1/7 & 14.



Attention!
The supply line must have a sufficient cross-section. The cable protection must comply with national and international regulations.

5.3.2 Routing via ExConnection Rail (optional accessories)

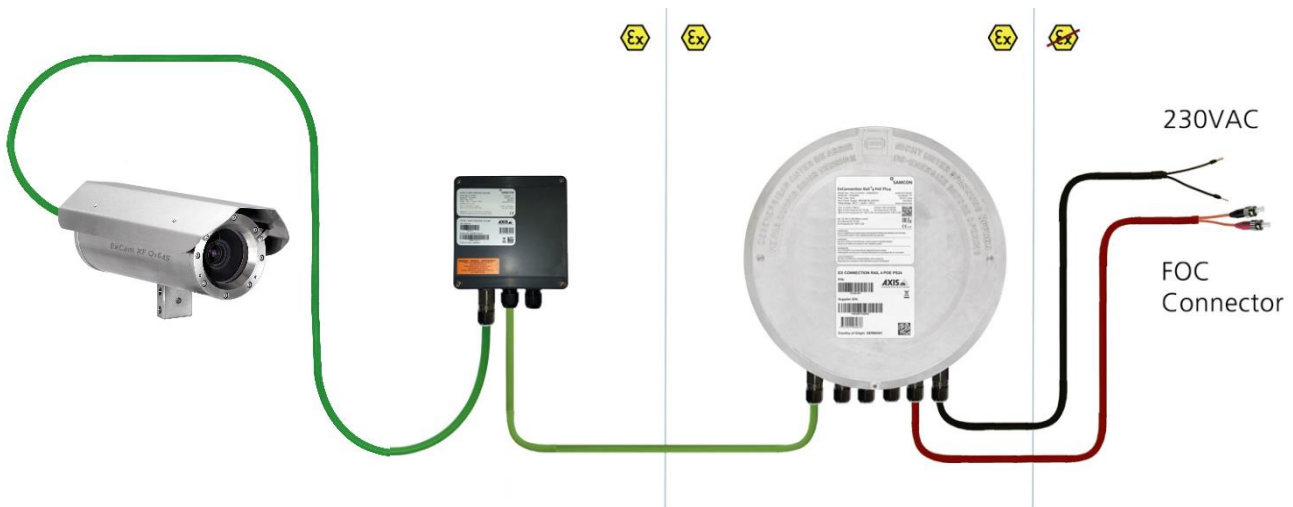


Figure 5-7 ExTB-3 -> ExConnection Rail

In the case of routing the ExTB-3 into an ExConnection Rail, larger installation distances can be managed.

Note:

In hazardous areas, the ExConnection Rail (optional accessories) acts as a PoE+ switch, a media converter from copper to fibre-optic cable, as well as a power supply for the cameras.



Attention!
Cables and wires must comply with the requirements of the IEC 60079-0/1/7 & 14.



Attention!
The supply line must have a sufficient cross-section. The cable protection must comply with national and international regulations.

5.3.3 Appropriate cables & cable entries

An integral part of the device safety is the correct selection of the cables, wires and cable entries.



Attention!

Cables and wires must comply with the requirements of the IEC 60079-0/1/7 & 14.



Attention!

The supply line must have a sufficient cross-section. The cable protection must comply with national and international regulations.

For non-binding configuration and planning guidelines, please visit our website:



Particularly for installations requiring a suitable barrier gland, make sure that you handle them correctly and observe the rules and notes given in the respective mounting and assembly instructions.

We show the essential procedures in the following video tutorial:

Video Tutorial:

Please note our video tutorial:



“SAMCON 02 Mounting and installing Ex-d barrier glands to ExConnection Rails”
<https://go.samcon.eu/v02>



Figure 5-8 Barrier gland

5.3.4 Cable kits - "plug and play" connection packages

As an option, there are various cable kits for different cables are available in different lengths. The connection packages include everything you need for a professional system installation:



- ✓ 10/25/95 m ASKDP03-T system cable, digital (a)
- ✓ 1 barrier gland with sealing compound (b)
- ✓ 5 ml of Loctite thread locking (c)
- ✓ One CAT6 RJ45 industrial connector (5.5 - 10.5 mm) (d)
- ✓ Heat-shrinkable tube 40 cm, yellow-green (e)
- ✓ Heat-shrinkable tube 10 cm, black (e)
- ✓ 8 cable end sleeves (e)
- ✓ 1 set of documents

Figure 5-9 Cable kit – plug & play connection package

Available connection packages:

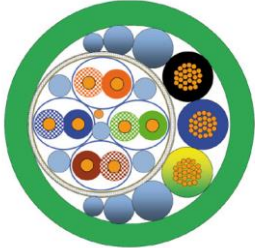
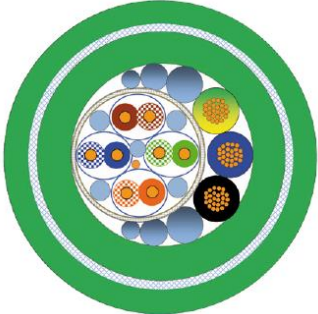
Length	Non-reinforced cable SKDP03-T	Reinforced cable ASKDP03-T
		
10 meters	<p>SKDP03-T CABLE EXCAM 10M (01540-001)</p> <p>This cable set includes: 10 meters SKDP03-T system cable, digital 1 barrier gland Ex-d 5 ml Loctite 243 screw locking One CAT6 RJ45 industrial plug 1 set of documents</p>	<p>ASKDP03-T CABLE EXCAM 10M (01543-001)</p> <p>This cable set includes: 10 meters ASKDP03-T system cable, digital 1 bolted connection Ex-d 1 bolted connection Ex-e 5 ml Loctite 243 screw locking One CAT6 RJ45 industrial plug 1 set of documents</p>
25 meters	<p>SKDP03-T CABLE EXCAM 25M (01541-001)</p> <p>This cable set includes: 25 meters SKDP03-T system cable, digital 1 barrier gland Ex-d 5 ml Loctite 243 screw locking One CAT6 RJ45 industrial plug 1 set of documents</p>	<p>ASKDP03-T CABLE EXCAM 25M (01545-001)</p> <p>This cable set includes: 25 meters ASKDP03-T system cable, digital 1 bolted connection Ex-d 1 bolted connection Ex-e 5 ml Loctite 243 screw locking One CAT6 RJ45 industrial plug 1 set of documents</p>
95 meters	<p>SKDP03-T CABLE EXCAM 95M (01542-001)</p> <p>This cable set includes: 95 meters SKDP03-T system cable, digital 1 barrier gland Ex-d 5 ml Loctite 243 screw locking One CAT6 RJ45 industrial plug 1 set of documents</p>	<p>ASKDP03-T CABLE EXCAM 95M (01542-001)</p> <p>This cable set includes: 95 meters ASKDP03-T system cable, digital 1 bolted connection Ex-d 1 bolted connection Ex-e 5 ml Loctite 243 screw locking One CAT6 RJ45 industrial plug 1 set of documents</p>

Table 5-3 Available cable kits

5.3.5 Fusing

PoE power supply requires no fuses. The power supply fusing depends on the cable cross-section and length.



Attention!

Recommendation for fusing relates to 40W@24VDC at 100 meters and 1.5 mm²



Attention!

When the heating switches on, high current peaks occur! Use slow-blow fuses.



Attention!

Please pay attention to the national and international regulations regarding selectivity and line protection.

Potential/ Wire no.	Colour (IEC60757)	Conductor	Voltage	Maximum power consumption/fusing:
L+ / 1	BK	1.5mm ² , stranded wire	+24 V DC	40 W of continuous power Fine-wire fuse (L+) 4000 mA -T- slow-blow (high inrush load!)
L- / 2	BU	1.5mm ² , stranded wire	0 V DC / GND	
PE	YE/GN	1.5mm ² , stranded wire	PE	

Table 5-4 Recommendation for fusing

5.3.6 Plug assignments (RJ45)

The data transfer of the ExCam XF Q1645 series uses a 100 Mbit/s Ethernet connection (100BASE-TX). If the cable termination uses a plug, the latter should be plugged into the RJ45 PoE slot of the network device (PSE). Prior to connecting it to the camera, the network device (PSE) can already be supplied with power, hence there is no „power ON“ priority which has to be observed.



Attention!

Use appropriate RJ45 plugs! Check the cable shielding, cross-section and the outside diameter!



Attention!

It is imperative to ensure a correct routing of the individual wires according to the EIA/TIA-568B"



Attention!

Finally, check your network installation with a Class-D Link Test.

Detailed instructions on how to connect a RJ45 plug are available in our video tutorial: “SAMCON 03 Mounting and installing the RJ45 jack to SAMCON cables”
<https://go.samcon.eu/v03>



Figure 5-10 Plug assignment, RJ45

5.3.7 Tests prior to switching on voltage



Attention!

Prior to starting the device, perform all tests as indicated by the national regulations. Furthermore, check the correct function and installation of the device in accordance with this User Manual and other applicable regulations.



Attention!

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



Attention!

Do not switch on the camera at temperatures below 0°C!

6 Working inside the camera housing (Ex-d)

The customer may open the housing only if it is absolutely necessary. Only exchanging the SD memory card or a hardware reset are reasons for this.

6.1 Preparation for work:



Attention!

Prepare your work carefully and in accordance with the relevant regulations.



Attention!

Depending on classification of hazard areas, it is imperative to obtain a work approval first!

If you adjust the camera yourself or open the pressure-resistant enclosure (Ex-d) under voltage, it is absolutely imperative to prevent potentially explosive atmosphere!

6.2 Opening the pressure-resistant housing



WARNING – MAY NOT BE OPENED IN HAZARD AREAS

Note: Depending on classification of hazard areas, it is imperative to obtain a work approval first!

Even after switching on the power supply, it is absolutely imperative to avoid potentially explosive atmosphere when opening the camera housing. Opening the housing requires disassembly and working in a safe (i.e. non-explosive!) area.



Attention!

Pay attention not to damage the thread surface of the flame-proof gap.



Attention!

Pay attention not to damage the housing seals. Keep them clean!

The ExCam XF Q1645 is equipped with a weather protection roof. Prior to starting you work, remove this roof! To do so, loosen the 4x8mm lens screws M4*0.7 at the front and rear sides of the bracket holders (Figure 6-1).

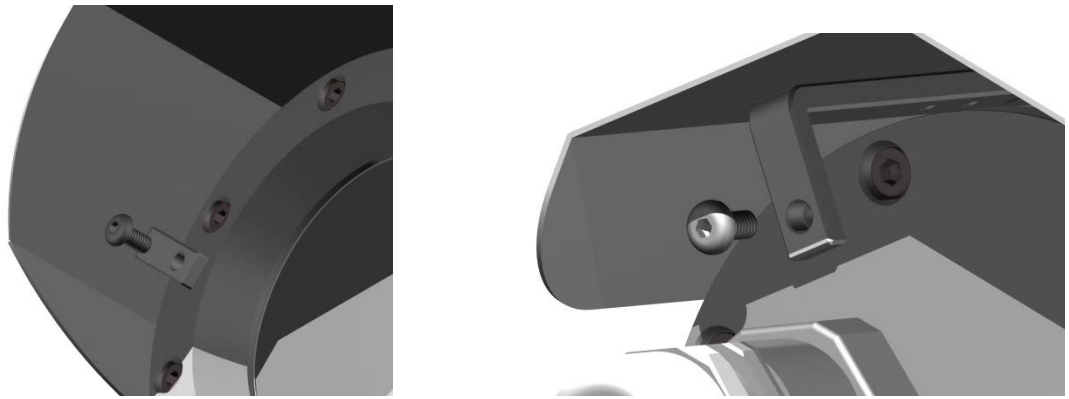


Figure 6-1 Removing the weather protection roof (1/2) (this illustration is an example)

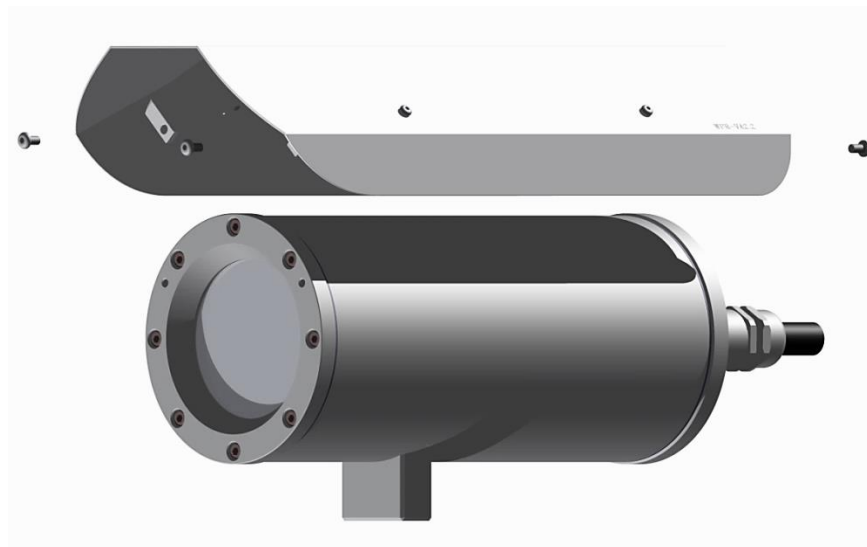


Figure 6-2 Removing the weather protection roof (2/2) (similar illustration)

To open the stainless-steel housing (T07 VA2.3.x.x) of ExCam XF Q1645, loosen the eight cylinder-head hexagon screws (DIN 912/ ISO 4762) together with their spring rings (DIN 127A) on the rear side of the cable and power supply flange (see Figure 6-3). Caution: do not touch the screw threads with your skin or clothes! On the threads, there is LOCTITE® 243™ (chemical basis is dimethacrylate ester) applied to prevent the bolted connection from unintentional loosening because of impacts and vibrations and to seal them tightly. It is not permitted for the customer to open the front-side sight glass flange! There is no need of such an action.

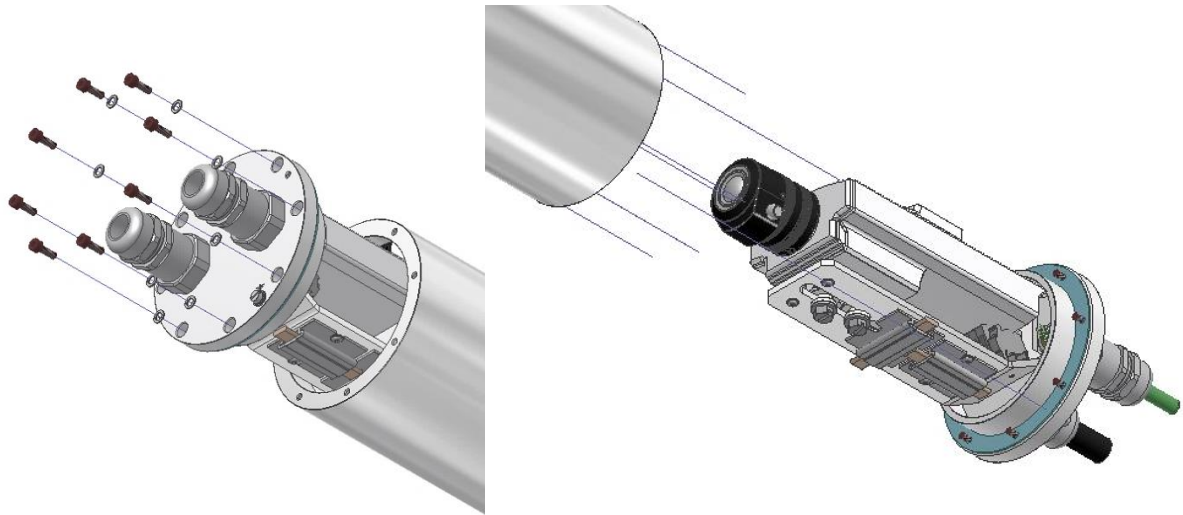


Figure 6-3 Opening the ExCam XF Q1645 (similar illustration)

Carefully pull out the cable and supply flange to the rear, as straight as possible. Because of negative pressure, it may be difficult to remove the flange. The cylindrical clearance fit (H8f7 - DIN ISO 286) of the camera body and flange may not be tilted! Risk of damage to the flame-proof gap (DIN EN 60079-1:2012)!

Attention: The mounting adapter with the housing's PTC heater, camera module and optics, as well as the temperature control, and (if applicable) auxiliary relays and terminal block are fixed on the cable and supply flange. Dealing with these components, too, you have to work very carefully and precisely in order to avoid canting and damage to the in-built components! Caution: do not touch the cylindrical fit surface with your skin or clothes! On the surface, there is oil lubricating paste to protect the surface against fretting corrosion and mechanical stresses.

When you open the housing, pay attention that you do not damage the GYLON® flat seal (blue, RAL5012) and do not make it dirty! The flat gasket is loosely attached to the cable and power supply flange. It is fixed only by the bolted connections!



Attention!

Pay attention not to damage the surface of the drill hole and the shaft (fitting) of the flame-proof gap.



Attention!

Pay attention not to damage the housing seals. Keep them clean!

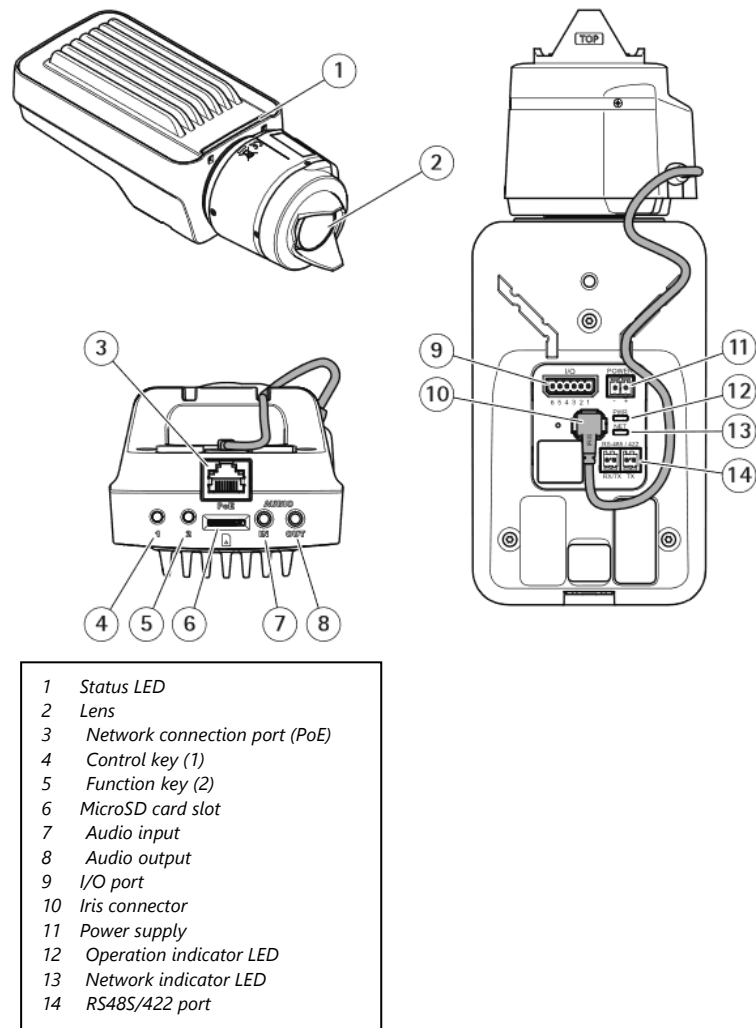


Figure 6-4 Structure of the camera (similar illustration)

6.3 Removing / inserting a SD memory card

Note:

The ExCam XF Q1645 has a slot for a micro SDHC memory card. Saved video files can be played and deleted via the web interface. They are also available in a download list. Moreover, the videos available in the memory card can also be accessed via FTP server in the network.

If the memory card has to be replaced by the user, it should be, as far as possible, empty and pre-formatted with an ext4 or vFAT file system.



When touching electrical components, observe potential equalization (grounding of the body): carry electrostatic-discharge clothes, a PE wristband etc.!

6.4 Hardware Reset

To set all the parameters of the ExCam XF Q1645 (including the IP address) to default values, you should run a hardware reset.

The parameters can be reset via the web interface or manually. If the camera placed in the network can no longer be reached or its state is uncontrollable, the reset should be performed manually. To do so, proceed as follows:

1. Disconnect the camera installation module (Axis Q1645) from the power supply.
2. Press and hold the control button (see the illustration below) and, at the same time, connect the system to the voltage supply (PoE).
3. Hold the control button pressed for about 30 seconds.
4. Release the control button. After about a minute, the AXIS Q1645 will return to factory defaults. If there is a DHCP server in the network, the IP address will be the following: 192.168.0.90 (subnet masking 255.255.255.0).
5. IP address and password can be redefined. If the hardware reset is not satisfactory or the network camera shows serious conflicts or does not work as usual (errors in the browser visualisation, frozen images, control commands no longer processed, slowing down of the system, etc.), it may be necessary to re-install the current firmware, or to install an update (see Chapter 7).

6.5 Closing of the pressure-resistant housing

For closing the housing, proceed in reverse order as when opening. Use exclusively original screws included in the supply.

The cable and power-supply flange (K3) is fixed by 8 cylinder-head screws M4*0,0.7 (ISO metric right-turning) with 30 mm thread length (DIN 912/ ISO 4762, grade 6g). Materials of bolted connections are identical to the pressure-resistant stainless steel housing (standard material no. 1.4404 AISI316L). Check whether the threaded holes are undamaged and clean. Before closing, it is also absolutely imperative to check the flame-proof gap (circular cylindrical fit).



Attention!

If any mechanical damages occurred to the fitting gap, it is no longer allowed to use the housing!



Attention!

Do not lock-in any foreign objects in the housing.

Dismantled screw locks (spring washers DIN 127A) must be used again.

The GYLON® gasket must be used in undamaged condition, according to the flange hole pattern, and placed between the flange and the hull. The lateral position of the flat surface / contact surface is arbitrary.

If, when closing the housing, you see that the surface of the fitting gap is dirty or insufficiently lubricated, clean it with a clean cloth and de-grease it with a suitable cleaning agent. Then re-grease it with lubricant suitable for this specific application (e.g., Molykote® P-40 gel for standard applications or special grease OKS 403 in the event of heavy seawater influence).

The screwed connections of flange and body components must always be tightened *crosswise* to a torque of **3 Nm**! Do not tighten the screw too strongly! It can cause rupture of the cylinder head or over-stretching the threads, and thus to impairment of the pressure resistance or ignition protection class



Cylinder-head bolts for explosion-proof connection of the camera body with the flange component must always be tightened at a 3 Nm torque - crosswise and evenly!

6.6 Battery

The ExCam XF Q1645 is equipped with a high-temperature resistant Panasonic button cell BR2330A/VAN. This cell supplies energy to the internal real time clock (RTC). The customer is not allowed to replace the battery! In this case, please contact the manufacturer.

7 Network access and visualization

The most important procedures of the first starting up the camera are described below. The configuration menu of the web surface allows an intuitive navigation and offers several configuration possibilities. For detailed documentation and information how to use the web Interface, please see the User Manual for Axis or visit the following website:

<https://www.axis.com/products/axis-q1645>



The delivered ExCam XF Q1645 is set to the applicable net frequency (50Hz or 60Hz). If the camera is used at a location with a differing net frequency, the image might start to flicker, particularly in surroundings with fluorescent tubes. In such a case, the applicable settings have to be carried out inside the menu “System Options > Advanced > Plain Config”.

User: root
Password: root

7.1 Browser Support

A list of the currently supported web browsers, operating systems, required add-ons, etc. can be viewed at:

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



7.2 Assigning the IP address

The ExCam XF Q1645 is intended for use in an Ethernet network and requires an IP address to access and control it. In the most today's networks, a DHCP server is integrated. This server automatically assigns an IP address.

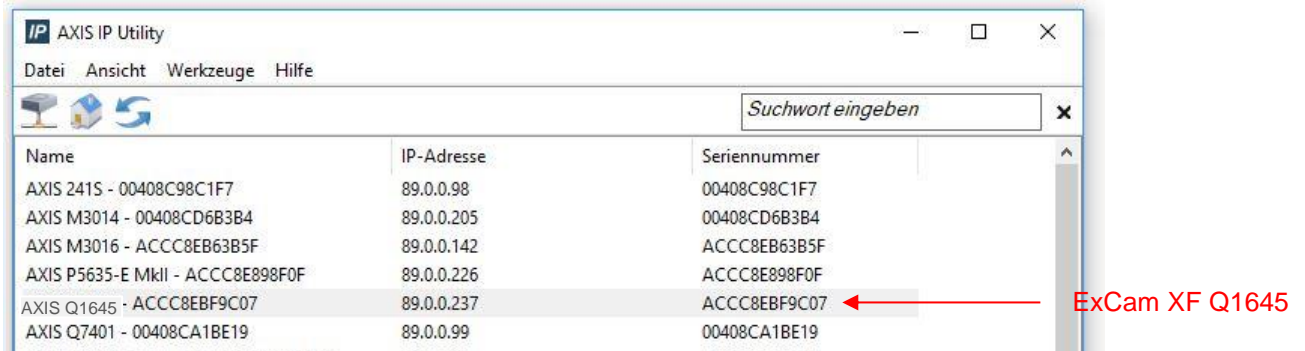
If there is no DHCP server available in the network, the IP default address of ExCam XF Q1645 is **"192.168.0.90" (subnet masking 255.255.255.0)**.

With the "AXIS IP Utility", it is possible to determine the IP address under Windows; the included USB stick contains this application.



If 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 visualises them in the device list. It can also be used to manually assign a static IP address. For this purpose, the ExCam XF Q1645 network camera has to be installed in the same physical network segment (physical subnet) as the computer on which the AXIS IP Utility is running. The network signature of ExCam XF Q1645 is "AXIS Q1645" (see Figure 7-1). MAC address and serial number for clear device identification are also detected and displayed.



Name	IP-Adresse	Seriennummer
AXIS 241S - 00408C98C1F7	89.0.0.98	00408C98C1F7
AXIS M3014 - 00408CD6B3B4	89.0.0.205	00408CD6B3B4
AXIS M3016 - ACCC8EB63B5F	89.0.0.142	ACCC8EB63B5F
AXIS P5635-E MkII - ACCC8E898F0F	89.0.0.226	ACCC8E898F0F
AXIS Q1645 - ACCC8EBF9C07	89.0.0.237	ACCC8EBF9C07
AXIS Q7401 - 00408CA1BE19	89.0.0.99	00408CA1BE19

Figure 7-1 Axis IP Utility

7.3 Password/ Identification

The following user name is set at the factory: **root**

The following password is set at the factory: **root**

8 Maintenance / Modification

The applicable regulations for the maintenance and servicing of electrical devices in potentially explosive atmospheres must be adhered to.

The required maintenance intervals are specific to the individual devices. The operating company has to determine these intervals depending on the application parameters. The maintenance tasks especially include examination of parts on which the ignition protection depends (e.g., proper condition of the casing, seals and cable entry points). If maintenance measures are necessary they have to be initiated and/or executed.

Repairs may only be carried out with original parts of SAMCON Prozessleittechnik GmbH. Damaged pressure-resistant housings have to be replaced completely. In case of doubt, send the part in question back to SAMCON Prozessleittechnik GmbH.

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

9 Disposal / Recycling

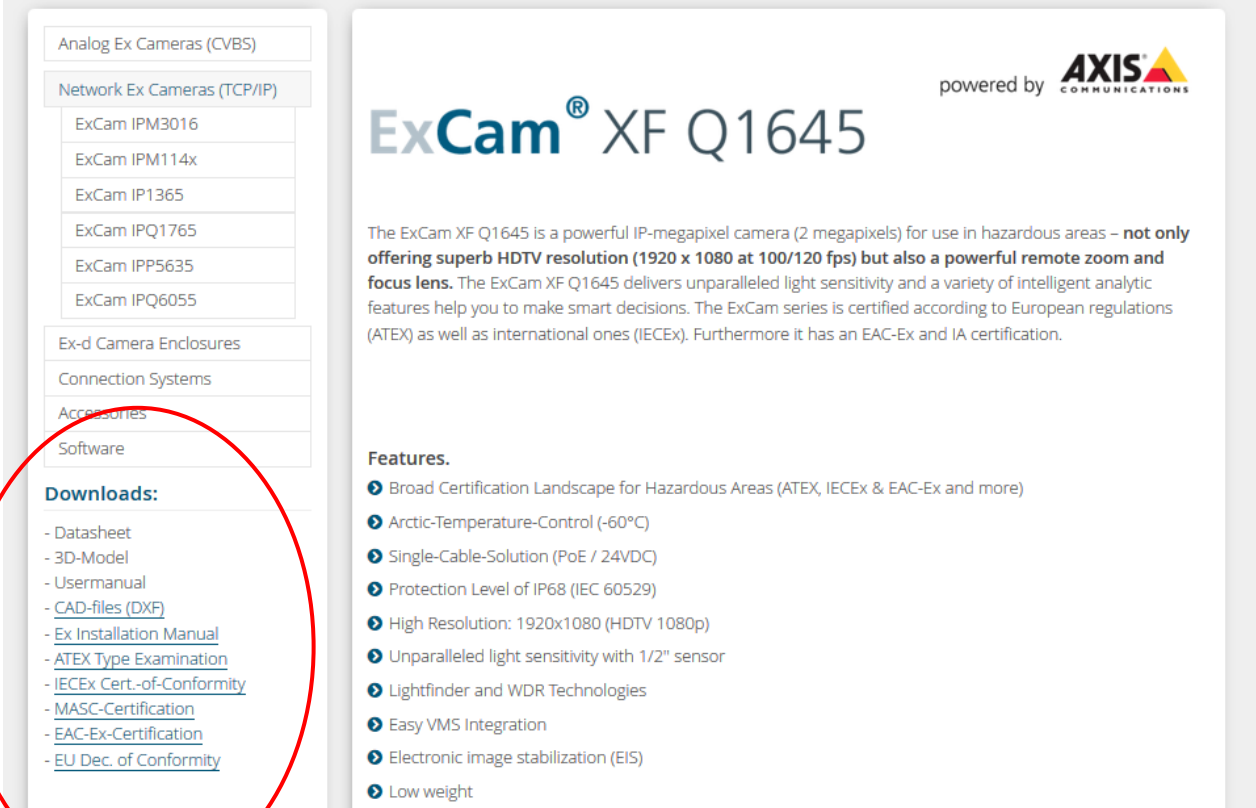
When disposing of the device, nationally applicable regulations must be observed.

This Document is subject to alterations and additions.

10 Drawings & 3D models

All drawings, 3D models, certificates and other information are available in the download area of the product page on our website:

<https://www.samcon.eu/en/products/network/excam-xf-q1645/>



The screenshot shows a product page for the ExCam XF Q1645. On the left, there is a navigation menu with categories like 'Analog Ex Cameras (CVBS)', 'Network Ex Cameras (TCP/IP)', 'Ex-d Camera Enclosures', 'Connection Systems', 'Accessories', and 'Software'. The 'Downloads:' section is circled in red and lists the following items:

- Datasheet
- 3D-Model
- Usermanual
- CAD-files (DXF)
- Ex Installation Manual
- ATEX Type Examination
- IECEx Cert.-of-Conformity
- MASC-Certification
- EAC-Ex-Certification
- EU Dec. of Conformity

The main content area features the product name 'ExCam[®] XF Q1645' and the text 'powered by AXIS COMMUNICATIONS'. Below this, a description states: 'The ExCam XF Q1645 is a powerful IP-megapixel camera (2 megapixels) for use in hazardous areas – **not only offering superb HDTV resolution (1920 x 1080 at 100/120 fps) but also a powerful remote zoom and focus lens.** The ExCam XF Q1645 delivers unparalleled light sensitivity and a variety of intelligent analytic features help you to make smart decisions. The ExCam series is certified according to European regulations (ATEX) as well as international ones (IECEX). Furthermore it has an EAC-Ex and IA certification.'

The 'Features.' section lists the following:

- Broad Certification Landscape for Hazardous Areas (ATEX, IECEx & EAC-Ex and more)
- Arctic-Temperature-Control (-60°C)
- Single-Cable-Solution (PoE / 24VDC)
- Protection Level of IP68 (IEC 60529)
- High Resolution: 1920x1080 (HDTV 1080p)
- Unparalleled light sensitivity with 1/2" sensor
- Lightfinder and WDR Technologies
- Easy VMS Integration
- Electronic image stabilization (EIS)
- Low weight

If you wish additional technical information, please contact us at:

support@samcon.eu

11 Certificates and further documentation

Certificates and further documentation are available in the download area at the product website:

<https://www.samcon.eu/en/products/network/excam-xf-q1645/>



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