



## Catalog. 2019



**High Quality Cameras for Hazardous Areas.**

[www.samcon.eu](http://www.samcon.eu)

 **SAMCON**  
Prozessleittechnik GmbH

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## SAMCON - The Company



**SAMCON Prozessleittechnik GmbH** was founded in 1992 and is located in Lohra-Altenvers, near Marburg and currently has 18 employees. The company is specialized in the development, production and sale of devices, software as well as engineering services in the area of process control engineering. The focus is on camera and communication systems for hazardous areas. The general manager of the company is Steffen Seibert.

Since 2008, the company has met the requirements for quality management specified by the directive 2014/34/EU (ATEX) and produces camera and communication systems for hazardous areas. In 2014, SAMCON extended their quality management system, now also comprising ISO 9001:2008 as well as IECEx QAR. Since 2007, SAMCON has been an Axis development partner and in 2013 this partnership was extended as both companies now jointly cooperate as technology partners.

SAMCON cameras are certified by the TÜV, the German Technical Inspection Authority. Whether simple explosion proof camera-monitor systems are required or complex CCTV systems have to be implemented - SAMCON always strive to offer the best solution to our customers. SAMCON's most important objectives are high quality planning, well thought-out equipment technology, safety, and of course customer satisfaction.

### Camera and Communications Systems for Hazardous Areas.

In the area of automation technology, a tendency is noticeable that CCTV systems (Closed Circuit Television) extend and even replace classical sensor technology. With the digitalization of video streams the possibilities increase to effectively integrate them into existing process control systems and procedures. The requirement spectrum of CCTV systems in hazardous areas ranges from rather simple observations by the means of static passive video sources, to cameras disposing of a zoom function and intelligent evaluation units, to complex PTZ cameras such as dome camera systems.

Due to the constantly increasing demands which explosion proof cameras have to fulfil as well as our effort to realize and implement our customers' requirements, our current scope comprises:

- Development, manufacturing and direct distribution of explosion proof camera systems and the applicable components
- Compilation of technical concepts to realize CCTV systems in hazardous areas
- Planning and project implementation of CCTV systems in hazardous areas
- Planning and development of analog and digital signal processing and analytical systems

## Our Customers



### Chemical and Pharmaceutical Industry.

Hardly any field has been so strongly altered by automated technology like the chemical industry. Process values that were still processed in large part manually in the 1960s led the way to equipment with process control systems and central measuring stations of today. Our camera systems increase the automation level of chemical and pharmaceutical production plants.



### Explosion Proof Cameras - Onshore & Offshore.

Oil and gas are still important energy sources and are hard to replace, especially for mobile applications. The ExCam series, especially the stainless steel models, are extremely robust: The weather resistant stainless steel casings have a rating of IP68 which means they are absolutely dust-tight and watertight during temporary submersion, making them ideally suited for all offshore uses.



### Explosion Proof Cameras for Refineries and Fuel Depots.

In most large refineries and fuel depot sites, process and safety monitoring requirements fit together seamlessly. Operating procedures are often only controlled and coordinated from a central control room. If information about what is happening on site is important it is possible to transfer the applicable information via camera technology to the measuring station.



### Cameras for Electronic and Mechanical Industries.

Cameras and optical sensors have long been an essential part of control systems in mechanical engineering. In general, two different fields of applications are distinguished: video surveillance and industrial image processing. In both types of application it is common to use cameras to confer at least some of the abilities of human sight on machines.

## ExCam® Series



High Quality Cameras for Hazardous Areas - by SAMCON.EU

The **ExCam Series** consists of different video cameras that are approved for dust and gas explosion risk zones, as well as mining, in accordance with the EU Directive 2014/34/EU (ATEX), the IECEx Schema and EAC-Ex.

The ExCam Series is the **world's smallest explosion proof camera system in its class**. The main advantage lies in the modular design: various different housings and electronic parts make it easy to assemble explosion proof cameras that suit your particular needs.

The **ExCam Series** consists of analogue cameras with varifocal lenses, motor-zoom cameras with infrared cut filter and digital network cameras with a resolution of more than 1920x1080 pixel (FullHD).



### Explosion Protection

The ExCam Series has been designed for use in hazardous areas and it is certified according to European regulations (ATEX) as well as international ones (IECEx). Furthermore it is also certified according to EAC-Ex to meet the requirements of the custom union. The cameras certification comprises ATEX group I (mining) with a low risk of mechanical threat as well as ATEX group II for zone 1, 2 as well as 21 and 22 including the explosion groups IIC / IIIC with a high risk of mechanical threat. In accordance with the requirements of the impact and free-fall tests (DIN EN 60079: 0 2012), the housings are suitable for fix and portable applications!



### Media Resistance and Sealings

Due to high-quality materials used for the ExCam series it meets the requirements of a comprehensive media resistance list! It is also possible to freely select different stainless steel alloys to reflect the best execution for the application. Even a coating or powder coating of the housing is feasible to realize individual media resistance requirements. The particularly designed GYLON (PTFE) flat sealing does not only ensure the housing to be watertight (IP68) but also supports the resistance towards several chemicals. The extremely robust and scratch-proof as well as high-impact resistant borosilicate glass fits perfectly into the high-quality materials of the housing body.



### Mining

As one of the first flameproof camera protection systems, the ExCam series meets all mining requirements (environments susceptible of fire damps) and is certified according to ATEX/IECEx for equipment group I M2 (Mb). If the housing series is used in mining environments with a low risk of mechanical damages it is even not necessary to equip the housing with an additional device in order to protect the borosilicate glass! As a result, the ExCam series allows for the first time a usage of stationary as well as portable surveillance systems underground.



### Temperatures

Also with regard to the allowed ambient temperatures the ExCam Series sets new standards.










The temperature limits with integrated heater or equipped with an active cooling system are -60°C and +70°C

Using active cooling, even high-end cameras can be used at high ambient temperatures!






## ExCam - Comparison Chart

### Cameras with analog signal output

														
		Product	Model-Keys	Ex-Certification <sup>*1</sup>	Prot.-Level	Enclosure Material <sup>*2</sup>	T <sub>min</sub> <sup>+3</sup> / T <sub>max</sub>	Power Supply	Lens/IR-Filter	Min.-Illumination	Angle of View	Signal <sup>*4</sup>	Video-comp. / Resolution <sup>*5</sup>	More Info
Analoge CVBS Signal		ExCam e.Vario	T08-VA1.2...	ATEX, IECEx & EAC-Ex: Dust, Gas	IP68	Stainless Steel	-40°C / +50°C	14 V DC to 30 V DC 2.6 W	Varifocal/ YES	0.1 lx	65° (wide)- 31.2° (tele)	CVBS	MJPEG H.264 1920x1080	
		ExCam nite-Zoom	T08-VA1.2...	ATEX, IECEx & EAC-Ex: Dust, Gas & Mining	IP68	Stainless Steel	-60°C / +50°C	12 V DC to 30 V DC 6.5 W	10 x Motor Zoom / YES	0.0004 lx	52° (wide) - 5.4° (tele)	CVBS VISCA®	MJPEG H.264 720x576	

### TCP/IP Network Cameras

														
		Product	Model-Keys	Ex-Certification <sup>*1</sup>	Prot.-Level	Enclosure Material <sup>*2</sup>	T <sub>min</sub> <sup>+3</sup> / T <sub>max</sub>	Power Supply	Lens/IR-Filter	Min.-Illumination	Angle of View	Signal <sup>*4</sup>	Video-comp. / Resolution <sup>*5</sup>	More Info
TCP/IP Net work cameras		ExCam IPM 3016	T08-VA1.2...	ATEX: Dust, Gas & Mining IECEX: Dust, Gas & Mining	IP68	Stainless Steel	-60°C / +55°C	PoE, IEEE 802.3at Class 1 Max. 3.8 W Typ. 2.9W	Fix / NO	0.4 lx	90° (wide) 17° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264/265 2304x1296	
		ExCam IPM 1145	T08-VA2.1...	ATEX: Dust, Gas & Mining IECEX: Dust, Gas & Mining	IP68	Stainless Steel	-60°C / +70°C	PoE, IEEE 802.3af Class 3 6 W	REMOTE ZOOM,& FOCUS/ YES	Color: 0.4 lx, B/W: 0.08 lx	95° (wide) 34° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080	
		ExCam IPM 1145-L	T08-VA2.1...	ATEX: Dust, Gas & Mining IECEX: Dust, Gas & Mining	IP68	Stainless Steel	-60°C / +60°C	PoE, IEEE 802.3af Class 3 10.5 W	REMOTE ZOOM & FOCUS, Integrated IR-LEDs/ YES	Color: 0.4 lx, B/W: 0.08 lx LED=ON: 0 lx	75° (wide) 34° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080	
		ExCam IP1365	T08-VA2.2...	ATEX: Dust, Gas & Mining IECEX: Dust, Gas & Mining	IP68	Stainless Steel	-60°C / +50°C	PoE, IEEE 802.3af Class 3 7.9 W	Varifocal / YES	Color: 0.18 lx, F1.2 B/W: 0.04 lx, F1.2	109° (wide) - 40° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080	
		ExCam IPQ1645	T08-VA2.3...	ATEX: Dust, Gas IECEX: Dust, Gas	IP68	Stainless Steel	-60°C / +60°C	PoE, IEEE 802.3af Class 3 Max.9.5 W Typ. 4.5 W	REMOTE ZOOM,& FOCUS/ YES	Color: 0.03 lx, F1.2 B/W: 0.01 lx, F1.2	77° (wide) - 24° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080	
		ExCam IPQ1785	T08-VA2.3...	ATEX: Dust, Gas IECEX: Dust, Gas	IP68	Stainless Steel	-60°C / +60°C	PoE, IEEE 802.3af Class 3 Max.12.9 W Typ. 7.7 W	MOTOR ZOOM,& AUTO FOCUS/ YES	Color: 0.16 lx, F1.2 B/W: 0.03 lx, F1.2	60° (wide) - 2.3° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080	
		ExCam IPP 5635	T08-TNXCD...	ATEX, IECEx, EAC-Ex: Dust & Gas (only explosion group IIB1)	IP68	Stainless Steel	-50°C / +50°C	PoE, IEEE 802.3at (PoE+) Max. 21 W	30xMotor Zoom, PTZ/ YES	Color: 0.2 lx B/W: 0.01 lx	65.6° (wide) 2.0° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080 @25fps	
		ExCam IPQ 6055	T08-TNXCD...	ATEX, IECEx, EAC-Ex: Dust & Gas	IP68	Stainless Steel	-50°C / +50°C	PoE, IEEE 802.3at (PoE+) Max. 19 W	32xMotor Zoom, PTZ/ YES	Color: 0.3 lx B/W: 0.03 lx	62.8° (wide) 2.23° (tele)	TCP/IP RTSP HTTP... VAPIX® ONVIF®	MJPEG H.264 1920x1080 @25fps	

\*1: Ex Certification (see Model Key):

\*2: Housing Materials:

\*4: Video signal:

ATEX Marking & Certification:

IECEX & EAC-Ex Marking & Certification:

Aluminum or Stainless Steel  
1.4301 / 1.4401 / 1.4404  
(AISI 316 / 316L)

PAL CVBS/FBAS as standard  
NTSC Models on demand

Gas:  II 2G Ex db IIC T6 Gb  
Dust:  II 2D Ex tb IIIC T80°C Db  
Mining:  I M2 Ex d I T6 Mb

Gas: Ex db IIC T6 Gb  
Dust: Ex tb IIIC T80°C Db  
Mining: Ex d I T6 Mb

\*3: Ambient Temperature:  
Please see Model key.

The ExCam e.Vario - Powerful Day/Night Motor Zoom Camera with IR Cut









**ExCam e.Vario**  
in a stainless steel housing

# ExCam e.Vario

The **ExCam e.Vario To8** is a motorized zoom camera certified according to **Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex**. With its 1/2.8" CMOS sensor and the IR cut filter it is one of the **most light sensitive cameras of its class**. It delivers excellent image quality, high light sensitivity and high resolution pictures. Although small in size it delivers a motorized zoom lens, allowing it to be optimally adapted to a specific angle and lighting situation by remote control.

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex					Group I (Mining)	ATEX / IECEx..	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✗

Product / Model	Description	
 <p>ExCam e.Vario T08-VA1.2.K1.BOR-N.N-005.N-X</p>		<p>Varifocal camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx and EAC-Ex (CR TU)</p> <p>Equipped with motorized varifocal lens</p> <p>Minimal illumination: 0.5 lx (color), 0.1 lx (b/w)</p> <p>Angle of view: 65° (wide) to 31° (tele)</p> <p>Day/night function within IR cut filter</p> <p>Power supply: 14VDC to 30VDC</p> <p>Max. power: 2.64W</p> <p>Explosion protection (gas): Ex II 2G Ex db IIC T6 Gb</p> <p>Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db</p> <p>Protection Level: IP 68 (IEC / EN 60529)</p> <p>Ambient temperature limit: <math>-10^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +50^{\circ}\text{C}</math></p> <p>Technical data: <a href="https://www.samcon.eu/en/products/analog/excam-evario/">https://www.samcon.eu/en/products/analog/excam-evario/</a> www.samcon.eu, product group: A, tariff number: 8525 8019</p>
<p>ExCam e.Vario T08-VA1.2.K1.BOR-L_N-005.N-X</p>		<p>Camera with housing heating for low temperatures:</p> <p>Equipped with a self-regulating heater to meet low temperature ranges.</p> <p>Ambient temperature limit: <math>-40^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +50^{\circ}\text{C}</math></p>
 <p>ExCam e.Vario remote control</p>		<p>Remote control for ExCam e.Vario to control focus and zoom without opening the housing</p> <p>Signal: RS-485</p> <p>Power supply: 12 V DC or 3V battery</p> <p>Material: Plastic (black)</p> <p>www.samcon.eu, Product group: C</p>
 <p>ExCam e.Vario remote panel</p>		<p>Remote control for ExCam e.Vario to control focus, zoom and menu navigation without opening the housing</p> <p>Signal: RS-485</p> <p>Power supply: 12 V DC</p> <p>Material: Plastic (black)</p> <p>Product group: C</p>
 <p>Video converter</p>		<p>Video converter converts the AHD video signal into a 4CIF signal for the connection of non-HD capable video server</p> <p>Video input: AHD, TVI, CVI, FBAS</p> <p>Video output: HDMI, VGA, FBAS (PAL, NTSC)</p> <p>Video connection: BNC plug (75Ohm, 1Vss)</p> <p>Output connector: HDMI Type-A, D-SUB 15, BNC (75Ohm, 1Vss)</p> <p>Power supply: 12 V DC</p> <p>Operating temperature: 0°C to 55°C</p> <p>Material: Metal (black)</p> <p>OSD Menu: Brightness, Contrast, color, resolution, PIP, 4:3/16:9, etc.</p> <p>Product group: C</p>
<p>A wide range of mounting accessories...</p>		<p>....can be found on <a href="#">#page_22!</a></p>

## The ExCam niteZoom - Powerful Day/Night Motor Zoom Camera with IR Cut





**ExCam niteZoom**  
in a stainless steel housing

# ExCam niteZoom

The **ExCam niteZoom To8** is a zoom camera certified according to **Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex**. With its 1/3" Super HAD CCD II sensor and the IR cut filter it is one of the **most light sensitive cameras of its class**. As a result the **ExCam niteZoom** delivers high resolution pictures even at an illumination level of only 0.0004 lx. Despite its compact dimensions, it has a 10x motorized zoom lens, allowing it to be optimally adapted to a specific angle and lighting situation.

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex					Group I (Mining)	ATEX / IECEx..	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✓

Product / Model	Description	
ExCam niteZoom T08-VA1.2.K1.BOR-C-005-X-N 	      	Camera with motor zoom in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx and EAC-Ex (CR TU) Motor Zoom Lens: 10x with Autofocus/Autoiris and IR Cut Minimal illumination: 1/4 s, 1/3 s mode & ICR on: 0.0004 lx Angle of view: 52° (wide) to 5.4° (tele) Interface: VISCA@RS422 Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db IP68 Explosion protection (mining): Ex I M2 Ex d I Mb Protection Level: IP 68 (IEC / EN 60529) Ambient temperature limit: 0°C < T <sub>amb</sub> < +50°C www.samcon.eu, product group: A, tariff number: 8525 8019
ExCam niteZoom T08-VA1.2.K1.BOR-C-XXX-X-L		Camera with housing heating foe low temperatures: Equipped with a self-regulating heater to meet low temperature ranges. Ambient temperature limit: -30°C < T <sub>amb</sub> < +50°C
ExCam niteZoom T08-VA1.2.K1.BOR-C-XXX-X-LL		Camera with housing heating for arctic temperatures: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier: Ambient temperature: -60°C < T <sub>amb</sub> < +40°C
Axis Q7401 		1-Channel Ethernet video server Video compression: MJPEG and H.264 Maximum transmission rate: 25fps@4CIF Digital In/Outputs: 4 (configurable as DI or DO) Interfaces: 1xRS422/485 Internal recording archive: via SD Slot Audio: Full duplex Required IP addresses: 1 Power supply: 9-20 VDC or PoE class 2 See data sheet for technical data - www.samcon.eu Product group: C, tariff number: 8525 5000
A wide range of mounting accessories...		....can be found on <a href="#">#page 22!</a>

The ExCam IPM3016 - PoE Network Camera with Fix Lens and FullHD Resolution






**ExCam IPM3016**  
in the stainless steel enclosure

# ExCam IPM3016

The **ExCam IPM3016** is a powerful IP-megapixel camera for the application in hazardous areas. It offers ultra compact size and Full HDTV resolution (1920p) in combination with 3 lenses (17°, 47°, 90°). With **ATEX**, **IECEX**, and **EAC-Ex** approval for gas and dust areas, the camera has a variety of certifications.

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex					Group I (Mining)	ATEX / IECEx...	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✗

Product / Model	Description	
ExCam IPM3016 T08-VA1.2.K1.BOR-N.N-005.N-I-090 		Network camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU) PoE, IEEE 802.3af/ 802.3at, type1 class 1 (max. 3.8 W, typ. 2.9 W) Minimal illumination: 0.35 lx at 50 IRE F2.4 Horizontal angle: 90° (wide) fix @16/9, [optional lens 46° (normal), 17° (tele)] Video compression: H.264 (MPEG-4 Part 10/AVC) Main and High Profiles, H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG Resolution: 2016 x 1512 to 320 x 240 (4:3) or 2304 x 1296 to 640x360 (16:9) Ex.-protection (gas): Ex II 2G Ex db IIC T6 Gb Ex.-protection (dust): Ex II 2D Ex tb IIIC T80°C Db Protection level: IP 68 (IEC / EN 60529) Ambient temperature range: $-5^{\circ}\text{C} < T_{\text{amb}} < +55^{\circ}\text{C}$ <a href="http://www.samcon.eu/en/products/network/excam-ipm3016/">http://www.samcon.eu/en/products/network/excam-ipm3016/</a> Included accessories: 5 meter cable connected to RJ45 plug Product group: A, tariff number: 8525 8019
ExCam IPM3016 T08-VA1.2.K1.BOR-N.N-005.N-I-090		Camera with terminal box termination: Included accessories: 5 m cable pre-mounted and pre-wired to an ex-e terminal box (see Ex-TB3)
ExCam IPM3016 T08-VA1.2.K1.BOR-LL.N-005.N-I-090		Camera with housing heating for arctic temperatures and terminal box termination: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes 5 meter cable pre-mounted and pre-wired to an ex-e terminal box Ambient temperature: $-60^{\circ}\text{C} < T_{\text{amb}} < +55^{\circ}\text{C}$
ExCam IPM3016 T08-VA1.2.K1.BOR-X.N-005.N-X-046		Camera with alternative lens: HFOV 46° (normal)
ExCam IPM3016 T08-VA1.2.K1.BOR-X.N-005.N-X-017		Camera with alternative lens: HFOV 17° (tele)
A wide range of mounting accessories...		....can be found on <a href="#">#page_22!</a>



## The ExCam IPM1145 (-L) - Compact Network Camera with Remote Zoom & Focus







**ExCam IPM1145-L**  
in a stainless steel housing

# ExCam IPM1145 (-L)

The **ExCam IPM1145 (-L)** is a network camera, approved according to Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex. As interchangeable lenses are not available for this series, this allows an **extremely compact** design and a **cost-effective manufacturing!** In addition, due to the fixed mounted lenses, functions such as **Remote-Zoom** and **Remote-Focus** are available: It is now possible to adjust the angle of view electronically without the necessity to open the housing. Also, some models of the series offer **integrated IR-LED illumination!**

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex					Group I (Mining)	ATEX / IECEx...	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✓

Product / Model	Description	
ExCam IPM1145 T08-VA2.1.K1.BOR-C-005-X-N 	        	Network camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU) Power supply: PoE, IEEE 802.3af Class 2 (6 W) Minimal illumination: 0.4 lx (Color), F1.4, 0.08 lx (B/W), F1.4 Horizontal angle: 95° - 34° (HD, 16/9) Resolution: 1920 x 1080 (ca. 2 megapixel) to 160 x 90 Functions: Remote-Zoom, Remote-Focus, etc... Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80° C Db IP68 Explosion protection (mining): Ex I M2 Ex d I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature: 0°C < T <sub>amb</sub> < +40°C www.samcon.eu, product group: A, tariff number: 8525 8019
ExCam IPM1145 T08-VA2.1.K1.BOR-C-005-X- <u>L</u>		Camera with housing heating for low temperatures: Equipped with a self-regulating heater to meet low temperature ranges: Ambient temperature: <u>-30°C</u> < T <sub>amb</sub> < +40°C
ExCam IPM1145 T08-VA2.1.K1.BOR-C-005-X- <u>LL</u>		Camera with housing heating for arctic temperatures: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier: Ambient temperature: <u>-60°C</u> < T <sub>amb</sub> < +40°C
ExCam IPM1145-L T08-VA2.1.K1.BOR-C-005-X-N 	        	Network camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU) Power supply: PoE, IEEE 802.3af Class 3 (10.5 W) Minimal illumination: 0.4 lx (Color), F1.4, 0.08 lx (B/W), F1.4 IR-LED=ON: 0 lx Horizontal angle (camera): 95° - 34° (HD; 16/9) Horizontal angle (LED): 30° Resolution: 1920 x 1080 (ca. 2 megapixel) to 160 x 90 Functions: Remote-Zoom, Remote-Focus, etc... Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80° C Db IP68 Explosion protection (mining): Ex I M2 Ex d I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature: 0°C < T <sub>amb</sub> < +40°C www.samcon.eu, product group: A, tariff number: 8525 8019
		...see next page for further options

Product / Model		Description
ExCam IPM1145-L T08-VA2.1.K1.BOR-C-005-X- <u>L</u>		Camera with housing heating for low temperatures: Equipped with a self-regulating heater to meet low temperature ranges: Ambient temperature: $-30^{\circ}\text{C} < T_{\text{amb}} < +40^{\circ}\text{C}$
ExCam IPM1145-L T08-VA2.1.K1.BOR-C-005-X- <u>LL</u>		Camera with housing heating for arctic temperatures: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for $-60^{\circ}\text{C}$ with integrated pressure barrier: Ambient temperature: $-60^{\circ}\text{C} < T_{\text{amb}} < +40^{\circ}\text{C}$
ExCam IPM114x T08-VA2.1.K1.BOR-C-XXX-X- <u>xH</u>  		Option <b>cool.Jacket „laminar Flow“</b> Active cooling system for hot ambient temperatures. The cool.Jacket works like an intercooler, using the on-site cool water (optionally on-site compressed air). The cold compressed water flows through the cool.Jacket cooling it down. The cool.Jacket is mounted on top of the camera housing to cool it down so that the inside temperature is kept below the maximum value. Ambient temperature: $xx^{\circ}\text{C} < T_{\text{amb}} < +70^{\circ}\text{C}$ Attention! In dust explosion risk zones, the cool.Jacket can only be used with hot air discharge! <a href="http://www.samcon.eu">www.samcon.eu</a> , Product Group: B, tariff number: 8525 8019
		Solenoid valves and tube packages
A wide range of mounting accessories...		..can be found on <a href="#">#page_22!</a>

## The ExCam IP1365 - Powerful PoE Network Camera with Remote Focus













**ExCam IP1365**  
in a stainless steel housing

# ExCam IP1365

The **ExCam IP1365** is a network camera, approved according to Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex. Due to **Power over Ethernet (PoE)**, it is possible to have only one cable for transmitting data as well as power! The ExCam IP1365 delivers several different video streams at the same time and supports **MJPEG and H.264 in HD resolution**. An additional feature is the option to freely select the lens and the extrem low temperature range.

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex				
Zone	0	1	2	21	22
Application	✗	✓	✓	✓	✓

Group I (Mining)	ATEX / IECEx	
Category	Ma	Mb
Application	✗	✓

Product / Model	Description	
ExCam IP1365 T08-VA2.2.K1.BOR-C-005-X-N 	      	Network camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU) PoE, IEEE 802.3af / 802.3at Typ 1 Class 3: Max. 7.9 W (typical 3.6 W) Minimal illumination: 0.18 lx (Color), 0.04 lx (B/W) Horizontal angle of view: 109° - 40° (HD, 16/9) Video compression: H.264 & Motion JPEG Resolution: 1920 x 1080 (FullHD) to 160 x 90 Lens mount type: CS Mount Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db IP68 Explosion protection (mining): Ex I M2 Ex d I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature limit: $-10^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ www.samcon.eu, Product Group: A, tariff number: 8525 8019
ExCam IP1365 T08-VA2.2.K1.BOR-C-005-X- <u>L</u>		Camera with housing heating for low temperatures: Equipped with a self-regulating heater to meet low temperature ranges: Ambient temperature: $-30^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$
ExCam IP1365 T08-VA2.2.K1.BOR-C-005-X- <u>LL</u>		Camera with housing heating for arctic temperatures: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier: Ambient temperature: $-60^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$
A wide range of mounting accessories...		...can be found on <a href="#">#page_22!</a>

## The ExCam IPQ1645 - Powerful PoE Camera with Remote Zoom and Remote Focus






**ExCam IP1645**  
in a stainless steel housing

# ExCam IPQ1645

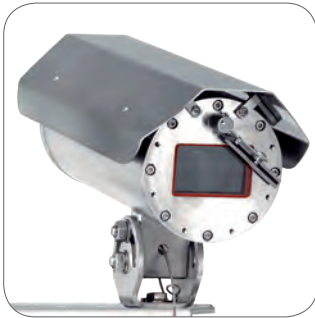
The **ExCam IP1645** is a network camera, approved according to Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex. Due to **Power over Ethernet (PoE)**, it is possible to have only one cable for transmitting data as well as power! The ExCam IP1645 delivers several different video streams at the same time and supports **MJPEG and H.264 in HD resolution**. Further outstanding features of this camera are the **unparalleled light sensitivity, high resolution (1920x1080)** as well as the **extrem broad temperature range!**

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex				
Zone	0	1	2	21	22
Application	✗	✓	✓	✓	✓

Group I (Mining)	ATEX / IECEx	
Category	Ma	Mb
Application	✗	✓

Product / Model	Description
<b>new!</b> ExCam IPQ1645 T08-VA2.3.K3.BOR2-N.H-005.N-P  Illustrations show models with accessories that are subjected to an extra charge	 <p>Network camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU)            PoE, IEEE 802.3af / 802.3at Typ 1 Class 3: Max. 9.5 W (typical: 4.5 W)            Minimal illumination: Color: 0.03 lx, Black/White: 0.01 lx            Horizontal angle of view: 77° - 24° (HD, 16/9)            Video compression: H.264 &amp; Motion JPEG            Explosion protection (gas): Ex II 2G Ex db IIC T6 Gb            Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db            Protection level: IP 68 (IEC / EN 60529)            Ambient temperature limit: <math>-10^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +60^{\circ}\text{C}</math>  <a href="https://www.samcon.eu/en/products/network/excam-ipq1645/">https://www.samcon.eu/en/products/network/excam-ipq1645/</a>            Product Group: A, tariff number: 8525 8019</p>
ExCam IPQ1645 T08-VA2.3.K3.BOR2-N.H-005.N-I	Camera with terminal box termination: Included accessories: 5 m cable pre-mounted and pre-wired to an ex-e terminal box (see Ex-TB3)
ExCam IP1645 T08-VA2.3.K3.BOR2-LL.N-005.N-P	 <p>Camera with housing heating for arctic temperatures:            Equipped with a self-regulating heater to meet extremely low temperature ranges.            Includes two cable glands certified for <math>-60^{\circ}\text{C}</math> with integrated pressure barrier:            Ambient temperature: <math>-60^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +45^{\circ}\text{C}</math></p>
ExCam IPQ1645 T08-VA2.3.K3.BOR2-LL.N-005.N-I	Camera with housing heating for arctic temperatures and terminal box termination: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for $-60^{\circ}\text{C}$ with integrated pressure barrier: Ambient temperature: $-60^{\circ}\text{C} < T_{\text{amb}} < +45^{\circ}\text{C}$ Included accessories: 5 m cable pre-mounted and pre-wired to an ex-e terminal box (see Ex-TB3)
A wide range of mounting accessories...	...can be found on <a href="#">#page_22!</a>

## The ExCam IPQ1785 - PoE Networkcamera with MotorZoom & Autofocus in FullHD



**ExCam IPQ1785**  
in stainless steel housing

# ExCam IPQ1785

FullHD resolution meets super Motorzoom lens! The **ExCam IPQ1785** is a network camera with motor zoom, approved according to Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex. Due to **Power over Ethernet (PoE)** is possible to have only one cable for transmitting data as well as power! The ExCam IPQ1785 delivers several different video streams at the same time and supports **MJPEG and H.264 in 2 Megapixel resolution** of 1920 x 1080 pixels.

Group II (Gas & Dust)	ATEX / IECEx / EAC-Ex					Group I (Mining)	ATEX / IECEx..	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✓

new!

Product / Model	Description	
 <p>ExCam IPQ1785 T08-VA2.3.K3.BOR2-N.H-005.N-P</p> <p>Illustrations show models with accessories that are subjected to an extra charge</p>		<p>Network camera in stainless steel housing accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU)</p> <p>PoE, IEEE 802.3af Type1, Class 3 (max. 12.95 W, typ. 7.7 W)</p> <p>Minimal illumination: Color: 0.16 lx, Black/White: 0.03 lx</p> <p>Horizontal angle of view: 60° - 2.3° (HD, 16/9) (Motorzoom)</p> <p>Video compression: H.264 (MPEG-4 Part 10/AVC), Motion JPEG</p> <p>Resolution: 1920 x 1200 (WUXGA) to 160 x 90</p> <p>Explosion protection (gas): Ex II 2G Ex db IIC T5 Gb</p> <p>Explosion protection (dust): Ex II 2D Ex tb IIIC T95°C Db</p> <p>Protection level: IP 68 (IEC / EN 60529)</p> <p>Ambient temperature: <math>-10^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +60^{\circ}\text{C}</math></p> <p><a href="https://www.samcon.eu/en/products/network/excam-ipq1785/">https://www.samcon.eu/en/products/network/excam-ipq1785/</a></p> <p>Product group: A, tariff number: 8525 8019</p>
ExCam IPQ1785 T08-VA2.3.K3.BOR2-N.H-005.N-T		<p>Camera with terminal box termination:</p> <p>Included accessories: 5 m cable pre-mounted and pre-wired to an ex-e terminal box (see Ex-TB3)</p>
ExCam IPQ1785 T08-VA2.3.K3.BOR2-L.H-005.N-P		<p>Camera with housing heating for low temperatures:</p> <p>Equipped with a self-regulating heater to meet low temperature ranges:</p> <p>Ambient temperature: <math>-30^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +60^{\circ}\text{C}</math></p> <p>Product group: A, tariff number: 8525 8019</p>
ExCam IPQ1785 T08-VA2.3.K3.BOR2-L.H-005.N-T		<p>Camera with housing heating for low temperatures and terminal box termination:</p> <p>Equipped with a self-regulating heater to meet low temperature ranges:</p> <p>Ambient temperature: <math>-30^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +60^{\circ}\text{C}</math></p> <p>Included accessories: 5 m cable pre-mounted and pre-wired to an ex-e terminal box (see Ex-TB3)</p>
 <p>ExCam IPQ1785 T08-VA2.3.K3.BOR5-LL.H-005.N-P</p>		<p>Network camera in stainless steel housing with wiper and housing heating for arctic temperatures:</p> <p>Equipped with a wiper and a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier:</p> <p>Ambient temperature: <math>-60^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +60^{\circ}\text{C}</math></p> <p><a href="https://www.samcon.eu/en/products/network/excam-ipq1785/">https://www.samcon.eu/en/products/network/excam-ipq1785/</a></p> <p>Product group: A, tariff number: 8525 8019</p>
ExCam IPQ1785 T08-VA2.3.K3.BOR5-LL.H-005.N-T		<p>Camera with wiper, housing heating for arctic temperatures and terminal box termination:</p> <p>Equipped with a wiper and a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier:</p> <p>Ambient temperature: <math>-60^{\circ}\text{C} &lt; T_{\text{amb}} &lt; +60^{\circ}\text{C}</math></p> <p>Included accessories: 5 m cable pre-mounted and pre-wired to an ex-e terminal box (see Ex-TB3)</p>
A wide range of mounting accessories...		....can be found on <a href="#">#page_22!</a>

## The ExCam IPP5635 - PoE Network Dome Camera with 30x Motor Zoom & FullHD














**ExCam IPP5635**  
in a stainless steel housing

# ExCam IPP5635

The **ExCam IPP5635** is a powerful network dome camera which can deliver 2 megapixel resolution at 1920 x 1080p points. It is certified in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex. The camera can continuous turn on its own axis and incline by 180°. The picture is automatically turned very precisely and rapidly. **Outstanding optical, electrical and mechanical features** are combined in this camera

Group II (Gas & Dust)	ATEX / IECEx/ EAC-Ex					Group I (mining)	-	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✗

Product / Model	Description	
ExCam IPP5635 T08-TNXCD-B-005-X-N 	       	Network dome camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU) Only explosion group IIB PoE, IEEE 802.3at, Typ 2 Category 4 (typical 8 W, max. 21 W) Minimum illumination: 0.2 lx (Color), 0.01 lx (B/W) Horizontal angle: 65.6° - 2.0° (HD, 16/9) Zoom: 30x optical zoom, 12x digital zoom Pan: 360° continuously, 0.2° – 350°/s Tilt: 180°, 0.02° – 350°/s Resolution: 1920 x 1080 bis 320 x 180 Functions: Preset positions, guard tours, sharpness, contrast, etc... Explosion protection (gas): Ex II 2G Ex d IIB T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db IP68 Protection level: IP 68 (IEC / EN 60529) Ambient temperature: 0°C < T <sub>amb</sub> < +50°C www.samcon.eu, product group: A, tariff number: 8525 8019
ExCam IPP5635 T08-TNXCD-B-XXX-X-L		Camera with housing heating for low temperatures: Equipped with a self-regulating heater to meet low temperature ranges. Ambient temperature: $-30^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$
ExCam IPP5635 T08-TNXCD-B-XXX-X-LL		Camera with housing heating for arctic temperatures: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier. Ambient temperature: $-50^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$
A wide range of mounting accessories...		....can be found on <a href="#">#page_22!</a>

## The ExCam IPQ6055 - PoE Network Dome Camera with 32x Motor Zoom & FullHD














**ExCam IPQ6055**  
in a stainless steel housing

# ExCam IPQ6055

The **ExCam IPQ6055** is a network dome camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex. It combines **outstanding optical, electrical and mechanical features**. The **scratch and heat resistant Lexan™ dome** guarantees a perfect picture quality despite the tough requirements of explosion protection. **The camera's heating concept is unique:** If necessary, the integrated and electronically controlled heating panel generates heat which via a radial and an axial flow fan is transported to the dome - even at **-50°C**.

Group II (Gas & Dust)	ATEX / IECEx/ EAC-Ex					Group I (mining)	-	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✗

Product / Model	Description	
ExCam IPQ6055 T08-TNXCD-C-005-X-N 	       	Network dome camera in a stainless steel housing in accordance with Directive 2014/34/EU (ATEX), IECEx, and EAC-Ex (CR TU) PoE, IEEE 802.3at (30 W) Minimum illumination: 0.3 lx (Color), 0.03 lx (B/W) Horizontal angle: 62.8° - 2.23° (HD, 16/9) Zoom: 32x optical zoom, 12x digital zoom Pan: 360° continuously, 0.05° – 450°/s Tilt: 180°, 0.05° – 450°/s Resolution: 1920 x 1080 bis 160 x 90 Functions: Preset positions, guard tours, sharpness, contrast, etc... Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db IP68 Protection level: IP 68 (IEC / EN 60529) Ambient temperature: 0°C < T <sub>amb</sub> < +50°C www.samcon.eu, product group: A, tariff number: 8525 8019
ExCam IPQ6055 T08-TNXCD-C-XXX-X-L		Camera with housing heating for low temperatures: Equipped with a self-regulating heater to meet low temperature ranges. Ambient temperature: $-30^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$
ExCam IPQ6055 T08-TNXCD-C-XXX-X-LL		Camera with housing heating for arctic temperatures: Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes two cable glands certified for -60°C with integrated pressure barrier. Ambient temperature: $-50^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$
A wide range of mounting accessories...		...can be found on <a href="#">#page_22!</a>

The RoughCam Series - Extreme Robust Cameras for Safe Areas and Sterile Rooms



**RoughCam IPM3016 und IP1365**  
in stainless steel

# RoughCam Series

Our **RoughCam Series** comprises mechanically process as well as security cameras which are extremely robust. All **RoughCams** meet the same high quality standards as our ExCams and are therefore perfect for even the roughest industrial conditions. The stainless steel housing in combination with borosilicate glass and high-end sealings make our **RoughCams** resistant to nearly all media; withstanding even the highest mechanical demands.

Group II (Gas & Dust)	-					Group I (Mining)	-	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✗	✗	✗	✗	Application	✗	✗

Product / Model	Description	
RoughCam e.Vario T10-VA1.2.K1.BOR-N.N-005.N-X 	IP68 	Varifocal camera in a stainless steel housing (IP68) equipped with motorized varifocal lens Minimal illumination: 0.5 lx (color), 0.1 lx (b/w) Angle of view: 65° (wide) to 31° (tele) Day/night function within IR cut filter Power supply: 14VDC to 30VDC Max. power: 2.64W Ambient temperature limit: $-10^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a> Product group: B, tariff number: 8525 8019
RoughCam niteZoom T10-VA1.2.K1.BOR-005-X-N 	IP68 	Camera with motor zoom in a stainless steel housing (IP68) Minimal illumination: 1/4 s, 1/3 s Mode & ICR on: 0.0004 lx Angle of view: 52° (wide) to 5,4° (tele) Interface: VISCA@RS422 Ambient temperature limit: $0^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a> Product group: B, tariff number: 8525 8019
RoughCam IPM3016 T10-VA1.2.K1.BOR-N.N-005.N-P-090 	IP68  HD 720p Onvif	Network camera in a stainless steel housing (IP68) Minimal illumination: 0.35 lx at 50 IRE F2.4 Horizontal angle: 90° fix @16/9, [optional lens 46° (normal), 17° (tele)] Video compression: H.264 (MPEG-4 Part 10/AVC) Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG Resolution: 1 2016 x 1512 to 320 x 240 (4:3) or 2304 x 1296 to 640 x 360 (16:9) Ambient temperature limit: $-5^{\circ}\text{C} < T_{\text{amb}} < +55^{\circ}\text{C}$ See data sheet for technical data - <a href="http://www.samcon.eu">www.samcon.eu</a> Product group: B, tariff number: 8525 8019
RoughCam IPM1145 T10-VA2.1.K1.BOR-005-X-N 	IP68  Onvif HD 1080p	Network camera in a stainless steel housing Power supply: PoE, IEEE 802.3af Class 2 (6 W) Minimal illumination: 0.4 lx (Color), F1.4, 0.08 lx (B/W), F1.4 Horizontal angle: 95° - 34° (HD, 16/9) Resolution: 1920 x 1080 (ca. 2 megapixel) to 160 x 90 Functions: Remote-Zoom, Remote-Focus, etc... Protection level: IP 68 (IEC / EN 60529) Ambient temperature: $0^{\circ}\text{C} < T_{\text{amb}} < +40^{\circ}\text{C}$ <a href="http://www.samcon.eu">www.samcon.eu</a> , product group: B, tariff number: 8525 8019



## RoughCam Series

Product / Model	Description	
RoughCam IPM1145-L T10-VA2.1.K1.BOR-005-X-N 	    	Network camera in a stainless steel housing Power supply: PoE, IEEE 802.3af Class 2 (6 W) Minimal illumination: 0.4 lx (Color), F1.4, 0.08 lx (B/W), F1.4 IR-LED=ON: 0 lx Horizontal angle (camera): 95° - 34° (HD, 16/9) Horizontal angle (LED): 30° Resolution: 1920 x 1080 (ca. 2 megapixel) to 160 x 90 Functions: Remote-Zoom, Remote-Focus, etc... Protection level: IP 68 (IEC / EN 60529) Ambient temperature: 0°C < T <sub>amb</sub> < +40°C www.samcon.eu, product group: B, tariff number: 8525 8019
RoughCam IP1365 T10-VA2.2.K1.BOR-005-X-N 	    	Network camera in a stainless steel housing PoE, IEEE 802.3af / 802.3at Typ 1 Class 3 (max. 7.9 W, typ. 3.6 W) Minimal illumination: 0.18 lx (Color), 0.04 lx (B/W) Horizontal angle of view: 109° - 40° (HD, 16/9) Video compression: H.264 & Motion JPEG Resolution: 1920 x 1080 (FullHD) to 160 x 90 Lens mount type: CS Mount Protection level: IP 68 (IEC / EN 60529) Ambient temperature limit: -10°C < T <sub>amb</sub> < +50°C www.samcon.eu, product group: B, tariff number: 8525 8019
<b>neu!</b> RoughCam IPQ1645 T10-VA2.3.K3.BOR2-N.H-005.N-P 	    	Network camera in a stainless steel housing. PoE, IEEE 802.3af / 802.3at Type 1 Class 3 (max. 9.5 W, typ. 4.5 W) Minimum illumination: Color: 0.03 lx, Black/White: 0.01 lx Horizontal angle of view: 77° - 24° (HD, 16/9) Video compression: H.264 & Motion JPEG Resolution: 1920 x 1200 (WUXGA) to 160 x 90 Protection level: IP 68 (IEC / EN 60529) Ambient temperature: -10°C < T <sub>amb</sub> < +60°C Product group: B, tariff number: 8525 8019
<b>neu!</b> RoughCam IPQ1785 T10-VA2.3.K3.BOR2-N.H-005.N-P 	    	Network camera in a stainless steel housing. PoE, IEEE 802.3af Type1, Class 3 (max. 12.95 W, typ. 7.7 W) Minimum illumination: Color: 0.16 lx, Black/White: 0.03 lx Horizontal angle of view: 60° - 2.3° (HD, 16/9) (Motorzoom) Video compression: H.264 (MPEG-4 Part 10/AVC), Motion JPEG Resolution: 1920 x 1200 (WUXGA) to 160 x 90 Protection level: IP 68 (IEC / EN 60529) Ambient temperature: -10°C < T <sub>amb</sub> < +60°C Product group: B, tariff number: 8525 8019
RoughCam		For our RoughCam series, we have the same configuration options as for our ExCam series! If you are unsure which option fits to which camera? Ask us: <a href="mailto:sales@samcon.eu">sales@samcon.eu</a>
A wide range of mounting accessories...		...can be found on <a href="#">#page 22!</a>

## The T07-Series - Flameproof Camera Enclosure Series

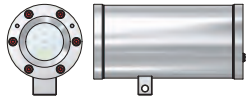

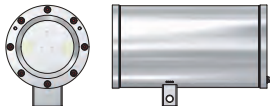

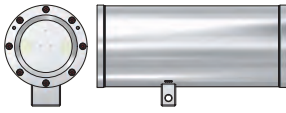
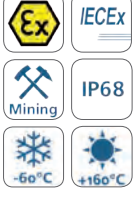




**T07 Housing Series**  
with size comparison

# Camera Housing (Ex)

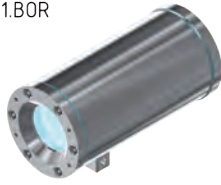
The **T07 housing series** is an extremely powerful camera housing concept suitable for hazardous areas and is certified according to European regulations (ATEX) as well as international ones (IECEx) (**U-Component-Certificate**). The housings' certification comprises ATEX group I (mining) and ATEX group II (gas & dust). In accordance with the requirements of the impact and free-fall tests (DIN EN 60079: 0 2012), the housings are suitable for fix and mobile (portable) applications!

Group II (Gas & Dust)	ATEX / IECEx (U)					Group I (Mining)	ATEX / IECEx..	
Zone	0	1	2	21	22	Category	Ma	Mb
Application	✗	✓	✓	✓	✓	Application	✗	✓

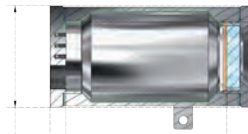
Product / Model	Description	
T07-VA1.2.K1.BOR 		Explosion proof camera housing in stainless steel according to Directive 2014/34/EU (ATEX) and IECEx (component certification) Dimensions (without pin): 79x79x157 mm, weight: 2200 g, Void volume: 480 cm <sup>3</sup> Explosion protection (gas): Ex d IIC Gb Explosion protection (dust): Ex tb IIIC Db IP68 Explosion protection (mining): Ex d I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature: -60°C < T <sub>amb</sub> < +160°C Product group: A
T07-VA2.1.K1.BOR 		Explosion proof camera housing in stainless steel according to Directive 2014/34/EU (ATEX) and IECEx (component certification) Dimensions (without pin): 113x113x210 mm, weight: 4200 g, Void volume: 1,520 cm <sup>3</sup> Explosion protection (gas): Ex d IIC Gb Explosion protection (dust): Ex tb IIIC Db IP68 Explosion protection (mining): Ex d I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature: -60°C < T <sub>amb</sub> < +160°C Product group: A
T07-VA2.2.K1.BOR 		Explosion proof camera housing in stainless steel according to Directive 2014/34/EU (ATEX) and IECEx (component certification) Dimensions (without pin): 113x113x261 mm, weight: 5100 g, Void volume: 1,960 cm <sup>3</sup> Explosion protection (gas): Ex d IIC Gb Explosion protection (dust): Ex tb IIIC Db IP68 Explosion protection (mining): Ex d I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature: -60°C < T <sub>amb</sub> < +160°C Product group: A
T07-VA2.3.K3.BOR2 		Explosion proof camera housing in stainless steel according to Directive 2014/34/EU (ATEX) and IECEx (component certification) Dimensions (without pin): 113x113x310mm, weight: 5900g, Void volume: 2350 cm <sup>3</sup> Explosion protection (gas): Ex db IIC Gb Explosion protection (dust): Ex tb IIIC Db Explosion protection (mining): Ex db I Mb Protection level: IP 68 (IEC / EN 60529) Ambient temperature: -60°C < T <sub>amb</sub> < +160°C Produktgruppe: A

Usable Dimensions

VA1.2.K1.B0R

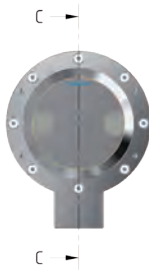


$\varnothing_A = 79,00\text{mm}$   
 $L_A = 157,80\text{mm}$

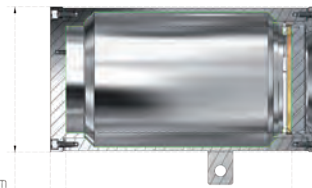


$\varnothing_i = 53,80\text{mm}$   
 $L_i = 125,10\text{mm}$

VA2.1.K1.B0R



$\varnothing_A = 113,00\text{mm}$   
 $L_A = 210,20\text{mm}$

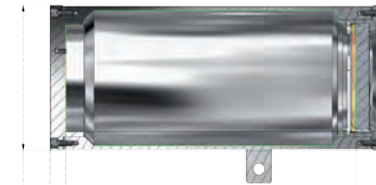


$\varnothing_i = 83,00\text{mm}$   
 $L_i = 175,50\text{mm}$

VA2.2.K1.B0R



$\varnothing_A = 113,00\text{mm}$   
 $L_A = 260,20\text{mm}$



$\varnothing_i = 83,00\text{mm}$   
 $L_i = 225,50\text{mm}$

VA2.3.K3.B0R2



$\varnothing_A = 113,00\text{mm}$   
 $L_A = 310,20\text{mm}$















$\varnothing_i = 83,00\text{mm}$   
 $L_i = 275,00\text{mm}$

## Ex Lighting Systems - Illuminators and Spotlights for Hazardous Areas
















# (Ex) Lighting Systems

Process and object lighting are obligatory in explosion risk zones and hazardous areas. The right combination of lighting equipment and the usage of fast camera lenses is essential to get crisp and sharp images. The following lighting systems are the perfect match for the ExCam series; using the same pressure-proof housings. Almost all lighting systems are available for non-explosion risk zones also.

### Process Illumination and Illumination for Small Spaces

Product / Model		Description
ChemLux FHEL d LED-S K1 	  	Lighting for explosion risk zones 230-240V AC, 7W, $T_{amb}$ : -20°C to +40°C Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db IP67 Protection level: IP 67 (IEC / EN 60529) Includes 5 m cable 3G x 1.5 mm <sup>2</sup> Product group: C, tariff number: 9405 4010
EdelEx 50 dh K1 (T4) 	  	Lighting for explosion risk zones 24V AC/DC, 50W, $T_{amb}$ : -20°C to +40°C Explosion protection (gas): Ex II 2G Ex d IIC T4 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T130°C Db IP67 Protection level: IP 67 (IEC / EN 60529) Includes 5 m cable 3G x 1.5 mm <sup>2</sup> Product group: C, tariff number: 9405 4010
EdelEx 20 d PowerLED K1 	  	Lighting for explosion risk zones 24V AC/DC or 230-240V AC, 7W, $T_{amb}$ : -20°C to +40°C Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Protection level: IP 65/67 (IEC / EN 60529) Includes 5 m cable 3G x 1.5 mm <sup>2</sup> Product group: C, tariff number: 9405 4010




### Room Illumination (White Light)


Product / Model		Description
SPX-FL12-W-8030 	   	LED White Light Illuminator 30W (80° x 30°) Angle: 80° x 30°, Operating voltage: 110-254V AC Power: 30 W Luminous flux 2000 lm, dimensions: 192x206x163 mm Explosion protection (gas): Ex em IIC T4 Gb Explosion protection (dust): Ex tb IIIC T82°C Db $T_{amb}$ : -50°C to +55°C, Protection level: IP66 (IEC / EN 60529) 12 ultra-durable LED, CoolExtrude™ Temperature Management More angles, light-range and temperature classes on request. Product group: C, tariff number: 9405 4010
SPX-FL24-W-8030 	   	LED White Light Illuminator 60W (80° x 30°) Angle: 80° x 30°, Operating voltage: 110-254V AC Power: 60 W Luminous flux 4000 lm, Dimensions: 291x247x150 mm Explosion protection (gas): Ex em IIC T4 Gb Explosion protection (dust): Ex tb IIIC T82°C Db $T_{amb}$ : -50°C to +55°C, Protection level: IP66 (IEC / EN 60529) 24 ultra-durable LED, CoolExtrude™ Temperature Management More angles, light-range and temperature classes on request. Product group: C, tariff number: 9405 4010
SPX-FL48-W-8030 	   	LED White Light Illuminator 120W (80° x 30°) Angle: 80° x 30°, Operating voltage: 110-254V AC Power: 120W, luminous flux 8000 lm, Dimensions: 291x438x151 mm Explosion protection (gas): Ex em IIC T4 Gb Explosion protection (dust): Ex tb IIIC T82°C Db $T_{amb}$ : -50°C to +55°C, Protection level: IP66 (IEC / EN 60529) 48 ultra-durable LED, CoolExtrude™ Temperature Management More angles, light-range and temperature classes on request. Product group: C, tariff number: 9405 4010

## Room Illumination (Infrared)

Product / Model	Description	
SPX-FL12-I-8030 		LED Infrared Illuminator 30W (80° x 30°) Viewing angle: 80° x 30°, lighting range: 40 m Operating voltage: 110-254V AC Power: 30W, 850 nm wavelength, dimensions: 192x206x163 mm Explosion protection (gas): Ex em IIC T4 Gb Explosion protection (dust): Ex tb IIIC T82°C Db T <sub>amb</sub> : -50°C to +55°C, Protection level: IP66 (IEC / EN 60529) 12 ultra-durable LED, CoolExtrude™ Temperature Management More angles, light-range and temperature classes on request. Product group: C, tariff number: 9405 4010
SPX-FL24-I-8030 		LED Infrared Illuminator 60W (80° x 30°) Viewing angle: 80° x 30°, Illumination range: 58 m Operating voltage: 110-254V AC Power: 60W, 850 nm wavelength, dimensions: 291x247x150 mm Explosion protection (gas): Ex em IIC T4 Gb Explosion protection (dust): Ex tb IIIC T82°C Db T <sub>amb</sub> : -50°C to + 55°C, Protection level: IP66 (IEC / EN 60529) 24 ultra-durable LED, CoolExtrude™ Temperature Management More angles, light-range and temperature classes on request. Product group: C, tariff number: 9405 4010
SPX-FL48-I-8030 		LED Infrared Illuminator 120W (80° x 30°) Viewing angle: 80° x 30°, Illumination range: 80 m Operating voltage: 110-254V AC Power: 120W, wavelength 850 nm, dimensions: 291x438x151 mm Explosion protection (gas): Ex em IIC T4 Gb Explosion protection (dust): Ex tb IIIC T82°C Db T <sub>amb</sub> : -50°C to + 55°C, Protection level: IP66 (IEC / EN 60529) 48 ultra-durable LED, CoolExtrude™ Temperature Management More angles, light-range and temperature classes on request. Product Group: C, tariff number: 9405 4010

## Special Applications

Product / Model	Description	
ExCam liteServer T08-VA1.2.K1.BOR-C-005-X-L 		Illumination accessory for our ExCam series T08 ... Spotlight in stainless steel housing. Explosion protection approval according to Directive 2014/34/EU (ATEX), IECEx schemes and EAC-Ex (CR TU) Only available in combination with an ExCam series T08 camera, we offer the possibility for an individual scene illumination device. The accessory component „ExCam lite server“ meets the technical as well as certification standards of our ExCam series T08 ... Ex.- protection (gas): Ex II 2G Ex d IIC T6 Gb Ex.- protection (Dust): Ex II 2D Ex tb IIIC T80°C Db IP68 Ex.- protection (Mining): Ex I M2 Ex d I Mb Protection level: IP68 (IEC / EN 60529) Ambient temperature: -40°C < T <sub>amb</sub> < + 60°C www.samcon.eu, product group: A, goods tariff number: 9405 4010
ExCam liteServer T08-VA1.2.K1.BOR-C-005-X-LL		Option housing heating for arctic temperatures (surcharge): Equipped with a self-regulating heater to meet extremely low temperature ranges. Includes a cable glands certified for -60°C with integrated pressure barrier. Ambient temperature: -60°C < T <sub>amb</sub> < +50°C



Distance in meter	1	2	3	4	5	10	20	30	40	50	60	70	
Illumination / Lux (10°)	6290	1573	692	377	252	41,2	9,65	7,11	2,4	1,54	1,04	0,76	
Illumination / Lux (25°)	2510	628	276	151	100								
Illumination / Lux (36°)	1190	298	131	71	48								

## Mounting Accessories

All accessories have been thoroughly tested with regard to their use in industrial zones, reflecting the highest quality standards. Accessories for explosion risk zones are in accordance with the current norms; DIN EN 60079-0,-14, Directive 2014/34/EU, as well as the norms for the applicable explosion protection.




### Mounting Systems for the ExCam Series T03 and T08-VA....

Product / Model	Description
Wall Mounting Bracket WMB-VA1.x 	Wall bracket short (stainless steel) Manual pan angle: 360°, manual tilt angle: 90° Includes hinge and mounting accessories in accordance with housing identity code: VA, AL, VAx.x Product group: A, tariff number: 8529 9092
Wall Mounting Bracket WMB-VA2.1/VA2.2 	Wall bracket long (stainless steel) Manual pan angle: 360°, manual tilt angle: 90° Includes hinge and mounting accessories in accordance with housing identity code: VA, AL, VAx.x Product group: A, tariff number: 8529 9092
Wall Mounting Bracket WMB-VA2.3 	Wall bracket for cameras of the series T08-VA2.3 (stainless steel) Manual pan angle: 360°, manual tilt angle: 90° Load bearing: 45 kg Includes hinge and mounting accessories Product group: A, tariff number: 8529 9092
Twin-Adapter WMB-VAx.x-TA-...-... 	Twin Adapter (stainless steel) Manual pan angle: 360°, manual tilt angle: 90° Includes hinge and mounting accessories for left and right side in accordance with housing identity code.(without wall bracket): Example: WMB-VA1.1-TA-VA-VA : Left and right for housing „VA“ Product group: A, tariff number: 8529 9092
SuperClamp - Mounting Adapter SCMA-... 	Super Clamp mounting adapter Screwless rapid installation of ExCams with the model keys T08-VA1.x, T08-T03 and VA2.1 to round or square profiles and pipe bridges. Note: The camera has to be grounded (PA) For diameters of 13 mm to 55 mm Point load: 15 kg Includes hinge and mounting accessories in accordance with housing identity code: VA, AL, VAx.x Product group: A, tariff number: 8529 9092
Pole Mounting Bracket PMB-VA1/2 	Pole Mounting Bracket Compatible with all „WMB“ wall brackets of the ExCam series with the model keys T08-VA1.x, T08-T03 and VA2.x. For diameters of 50 mm to 105 mm Point load: 15 kg Product group: A, tariff number: 8529 9092
Hinge attachment SCH-... 	Hinge attachment „SCH“ Easy mounting on round sight glasses. In accordance with DIN 28120/28121 (or similar) Includes mounting accessories for housing: AL, VA, VAx.x Product group: A, tariff number: 8529 9092
Thermo Isolator THERM-VA 	Thermo isolator for flanging the T03-VA... and T08-VA1.x...series onto hot sight glasses or to avoid incidences of extraneous light. Temperature range: -45° C to +100° C Durability: Weatherproof, ozone proof, non-ageing, acid resistant, alkali resistant Characteristics: extremely flame resistant, abrasion and impact resistant. Electrically puncture-proof Product group: A, tariff number: 8529 9092

## Weather Protection for the ExCam Series To3 and To8-VA...

Product / Model	Description
Weather Protection Roof WPR-VA1.x 	Hood (stainless steel) Includes hinge and mounting accessories for housing: WPR-VA1.1: for T08-VA1.1 WPR-VA1.2: for T08-VA1.2 Product group: A, tariff number: 8529 9092
Weather Protection Roof WPR-VA2.1 	Hood (stainless steel) The weather protection hoods for the ExCam T08 series dispose of mounting holes with a spacing of 5 mm in order to allow adjusting the hood's position to perfectly meet the selected angle of view. Includes hinge and mounting accessories for housing: WPR-VA2.1: for T08-VA2.1 Product group: A, tariff number: 8529 9092
Weather Protection Roof WPR-VA2.2 	Hood (stainless steel) The weather protection hoods for the ExCam T08 series dispose of mounting holes with a spacing of 5 mm in order to allow adjusting the hood's position to perfectly meet the selected angle of view. Includes hinge and mounting accessories for housing: WPR-VA2.2: for T08-VA2.2 Product group: A, tariff number: 8529 9092
Weather Protection Roof WPR-VA2.3 	Hood (stainless steel) The weather protection hoods for the ExCam T08 series dispose of mounting holes with a spacing of 5 mm in order to allow adjusting the hood's position to perfectly meet the selected angle of view. Includes hinge and mounting accessories for housing: WPR-VA2.3: for T08-VA2.3 Product group: A, tariff number: 8529 9092
















## Mounting Accessories for the ExCam Series To8-TNXCD

Product / Model	Description
Wall bracket WMB-TNXCD... 	Wall bracket for cameras of the T08-TNXCD series (stainless steel) The wall mount bracket has a two-part design with the main part consisting of a massive stainless steel welding construction. A protective hood for the wall mount bracket is also included in the delivery scope in order to protect the cable glands according to 60079-14 and to prevent that they are exposed to direct splash water. Load rating: 45 kg Dimensions: 460 x 220 140 mm Product group: A, tariff number: 8529 9092
Pole Mounting Bracket PMB-TNXCD 	Pole mount adapter PMB-TNXCD Pole adapter for TNXCD wall brackets Material: Stainless steel 1.4404 Suitable for pole diameters of 110 mm and 150 mm Load rating: 50 kg Product group: A, goods tariff number: 8529 9092
Corner Mount Adapter CMA-TNXCD 	CMA-Corner Mount Adapter for TNXCD or Am(N)Ex Systems Material: Stainless steel 1.4404 Load capacity: 50 kg Product group: A, goods tariff number: 8529 9092

## Installation Equipment

All accessories have been thoroughly tested with regard to their use in industrial zones, reflecting the highest quality standards. Accessories for explosion risk zones are in accordance with the current norms; DIN EN 60079-0,-14, regulation 2014/34/EU as well as the norms for the applicable explosion protection.









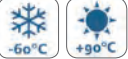



### Terminal Boxes in Ex-e

Product / Model		Description
ExTB-2 T12-M20-BP-M20 	   	Terminal box for analog and digital ExCam systems Ex.-protection (gas): Ex II 2 G Ex eb IIC T5 Gb Ex.-protection (dust): Ex II 2 D Ex tb IIIC T95°C Db Material: Polyester resin, dimensions: 145 x 145 x 71 mm Protection level: IP 66, Ambient temperature limit: -60°C to +55°C Max. power supply: 690V, max. diameter: 2.5 mm <sup>2</sup> 10 pcs. terminal clamp UT 2.5, Marking: 1-10, 3 pcs. terminal clamp UT 2.5 PE 2 pcs. M20 cable gland for non-armoured cables Cable cross-section: 7 ... 13 mm <sup>2</sup> Product group: C
ExTB-3 T12-M20-M20-M20 	   	Terminal box for analog and digital ExCam systems Ex.-protection (gas): Ex II 2 G Ex eb IIC T5 Gb Ex.-protection (dust): Ex II 2 D Ex tb IIIC T95°C Db Material: Polyester resin, dimensions: 145 x 145 x 71 mm Protection level: IP 66, Ambient temperature limit: -60°C to +55°C Max. power supply: 690V, max. diameter: 2.5 mm <sup>2</sup> 10 pcs. terminal clamp UT 2.5 (1-10), 3 pcs. terminal clamp UT 2.5 PE 3 pcs. M20 cable gland for non-armoured cables Cable cross-section: 7 ... 13 mm <sup>2</sup> Product group: C
ExTB-4 T12-M20-M20-M20-M20 	   	Terminal box for analog as well as digital ExCam systems Ex.-protection (gas): Ex II 2 G Ex eb IIC T5 Gb Ex.-protection (dust): Ex II 2 D Ex tb IIIC T95°C Db Material: polyester resin, Dimensions: 145 x 145 x 71 mm Protection level: IP 66, Ambient temperature limit: -60°C to +55°C Maximum power supply: 690V, Maximum diameter: 2.5 mm <sup>2</sup> 10 pcs. terminal clamp UT 2.5, Marking: 1-10, 3 pcs. terminal clamp UT 2.5 PE 4 pcs. M20 cable gland for non-armoured cables Cable cross-section: 7 ... 13 mm <sup>2</sup> Product group: C
Ex-e Terminal Box (BTO) ExTB-(BTO)		We have a large selection of junction boxes in Ex-e or Ex-d execution. Different materials, sizes and cable entries can be freely combined. Please ask us!




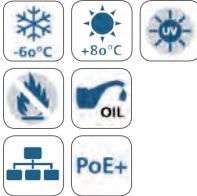

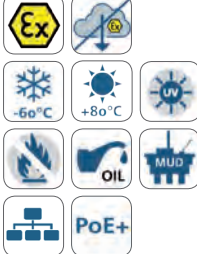

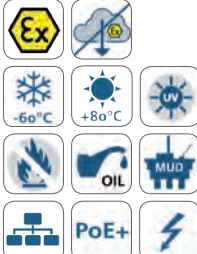

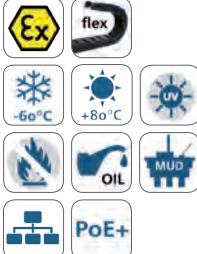
System Cables for Analog Cameras (CVBS)

Unarmoured Cables






















Product / Model		Description
<p>SKA02</p> 	    	<p>System Cable Analog No. 02                      Special cable in accordance to EN 60079-14                      Outer diameter: 9.4 mm, bending radius: min. 150 mm                      Video: 1x75 OHM Coax AWG 24, Cu shielded                      Data (physic.): 2x2x0.25 mm<sup>2</sup> closed Cu shielded                      Data (protocol): RS232, RS422, RS485 full duplex                      Power supply heating: 2x0.75 mm<sup>2</sup>                      www.samcon.eu, product group: A</p>
<p>SKA03-T</p> 	    	<p>System Cable Analog No. 03 -T                      Special cable in accordance to EN 60079-14                      for application in arctic temperatures (-60°C)                      Outside diameter: 11.8 mm, bending radius: min. 150 mm                      Video: 1x75OHM coax (cold resistant dielectric), Cu-shielded                      Data (physics.): 2x2x0.25 mm<sup>2</sup> closed Cu-shielded                      Data (protocol): RS232, RS422, RS485 full duplex                      Power supply power: 2 x 0.75 mm<sup>2</sup>                      Power supply heating: 3x1.5 mm<sup>2</sup> + 0.75 mm<sup>2</sup> GN/YE                      Dry contacts: Single cores 8 x 0.25 mm<sup>2</sup>                      www.samcon.eu, product Group: A</p>
		<p>...more cables upon request</p>

## System Cables for TCP/IP Network Cameras

### Unarmoured Cables

Product / Model		Description
SKD01-T (non Ex) 		System Cable Digital No.01 - T Special cable for use in arctic temperatures (-60°C) Outer diameter: $\varnothing 9.1 \pm 0.2$ mm Maximum bending radius: 10 x diameter during installation Material outer jacket: PUR - flame retardant according to IEC 60322-1-2 1KW flame Construction: 4 x 2 x AWG22/1 shielded Excellent for the wiring of PoE cameras or cameras with classic power supply. <a href="http://www.samcon.eu">www.samcon.eu</a> , product group A
<b>new!</b> SKD02-T 		System Cable Digital No.02 - T Special cable for hazardous areas in accordance with EN 60079-14 Outer diameter: $\varnothing 8.9 \pm 0.3$ mm Maximum bending radius: 10 x diameter during installation Material outer jacket: PUR - flame retardant according to IEC 60322-1-2 1KW flame Construction: 4 x 2 x AWG23/1 shielded Excellent for the wiring of PoE cameras or cameras with classic power supply. <a href="http://www.samcon.eu">www.samcon.eu</a> , product group A
<b>new!</b> SKDP03-T 		System Cable Digital No.03 - T Special cable for hazardous areas in accordance with DIN EN 60079-14 for use in arctic temperatures (-60°C) Outer diameter: $\varnothing 12.4 \pm 0.3$ mm Maximum bending radius: 8 x diameter during installation Material outer jacket: PUR – flame retardant according to IEC 60322-1-2 1KW flame Construction: 4 x 2 x AWG23/1 shielded GN J/W 3G1.5 Excellent for the wiring of PoE-cameras or cameras with classic power supply. <a href="http://www.samcon.eu">www.samcon.eu</a> , Produktgruppe A
<b>new!</b> SKD04-T.flex 		System Cable Digital No.04 - T.flexible Special cable for hazardous areas in accordance with DIN EN 60079-14 for use in arctic temperatures (-60°C) Outer diameter: $\varnothing 8.7 \pm 0.3$ mm Maximum bending radius: 8 x diameter during installation Material outer jacket: PUR – flame retardant according to IEC 60322-1-2 1KW flame Construction: 4 x 2 x AWG24/7 shielded GN J/W 3G1.5 Excellent for the wiring of PoE-cameras or cameras with classic power supply. Highly flexible and suitable for drag chain applications. <a href="http://www.samcon.eu">www.samcon.eu</a> , Produktgruppe A

## Armoured Cables

Product / Model		Description
ASKD02-T 	        	Armoured System Cable Digital No.02 - T Special cable for hazardous areas in accordance with EN 60079-14 for use in arctic temperatures (-60°C) Outer diameter: $\varnothing$ 13.2 $\pm$ 0.3 mm Maximum bending radius: 10 x diameter during installation Material outer jacket: PUR - flame retardant according to IEC 60322-1-2 1KW flame Construction: 4 x 2 x AWG22/1 shielded Excellent for the wiring of PoE cameras or cameras with classic power supply. <a href="http://www.samcon.eu">www.samcon.eu</a> , product group A
new! ASKDP03-T 	         	Armoured System Cable Digital Power No.03 - T Special cable for hazardous areas in accordance with EN 60079-14 for use in arctic temperatures (-60°C) Outer diameter: $\varnothing$ 15.5 $\pm$ 0.6 mm Maximum bending radius: 10 x diameter during installation Material outer jacket: PUR - flame retardant according to IEC 60322-1-2 1KW flame Construction: 4 x 2 x AWG23/1 shielded GN J/W 3G1.5 Excellent for the wiring of PoE cameras or cameras with classic power supply. <a href="http://www.samcon.eu">www.samcon.eu</a> , product group A
		...more cables upon request

### Hazardous Areas Characteristics:



The cable meets the requirements for cables in hazardous areas in accordance to IEC/EN 60079-14 Chapter 9.3.



The cable meets the requirements for cables in hazardous areas to avoid inter-zone gas-transfer in accordance to IEC/EN 60079-14 Appendix E.

### Environmental Characteristics:



The cable is tested at -60°C at fixed installation. Refer to the datasheet for temperatures regarding installation and flexible use.



The cable is tested at +80°C at fixed installation. Refer to the datasheet for temperatures regarding installation and flexible use.



The cable is sunlight resistant in accordance with UL 2556 Sec. 4.2.8.5 (720h).



The cable is flame retardant in accordance with IEC 60332-1-2.



The cable is oil resistant in accordance with IEC 60811-2-1 (IRM 902, 4h at 70°C).



The cable is mud resistant in accordance with NEK 606.



The cable is suitable for drag chain use: 1 million bending cycles, bending radius 20 x D, at a speed of 4 m/s, acceleration 4 m/s<sup>2</sup>, max. travel distance 10 m at 20°C.

### Electrical/Network Characteristics:



The cable is tested according to the following standards: IEEE 802.3 : Ethernet 10Base-T; Fast Ethernet 100Base-T ; Gigabit Ethernet 1000Base-T @ 95-Meter



The cable is tested according to the following standards: IEEE 802.3at. PoE+, max. 30W per channel, max. 95m.



The cable is constructed with an additional power element:  
 Square: 3 x 1.5 mm<sup>2</sup>, Color code: BK-BU-GN/YE.

The Connection Rail Series - Plug & Play Compact Cabinets for Safe Areas





# Connection Rail - Series

The **ConnectionRail Series** converts video, audio and binary signals in ethernet-network streams, making them available over long distances. Interface diversity makes our ConnectionRails solve every digitalization task. Network connection can be realized via optical fibers, copper-bound Ethernet or WLAN..

**Connection Rail**  
with stainless steel housing

Group II (Gas & Dust)	-				
Zone	0	1	2	21	22
Application	✗	✗	✗	✗	✗

Group I (Mining)	-	
Category	Ma	Mb
Application	✗	✗

Product / Model	Description
Connection Rail T05-4PoE+-100BaseTX 	High performance PoE-Switch for the safe area Compact cabinet, for wall mounting Protection level: IP 66 (IEC / EN 60529) Ambient temperature: $-10^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ Material: Stainless steel 1.4301 Dimension: 300 x 300 x 210 mm Input power: 100 VAC - 240 VAC Network input: 4 x PoE+ (10/100BaseT(X), IEEE 802.3at, max. 30W per port) Network uplink: 1 x 100BaseTX Cable glands: 5 x cable gland M20x1.5 (camera & uplink) 1 x cable gland M25x1.5 (power supply & FOC) Product group: B, tariff number: 8517 6200
Connection Rail T05-8PoE+-1000BaseTX 	High performance PoE-Switch for the safe area Compact cabinet, for wall mounting Protection level: IP 66 (IEC / EN 60529) Ambient temperature: $-10^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ Material: Stainless steel 1.4301 Dimension: 300 x 300 x 210 mm Input power: 100 VAC - 240VAC Network input: 8 x PoE+ (10/100BaseT(X), IEEE 802.3at, max. 30W per port) Network uplink: 1 x 10/100/1000BaseTX Cable glands: 8 x cable gland M20x1.5 (camera) 2 x cable gland M25x1.5 (power supply & Ethernet Uplink) Product group: B, tariff number: 8517 6200
Further Options	Many further Options through combination with different accessories are possible; they can be found in chapter accessories for (Ex-) Connection Rails & Racks If you have a specific problem please ask us.

## The ExConnection Rail Series - Connection and Transmission Units for Ex- Zones













**ExConnection Rail - PoE**  
in an Ex-de Enclosure

# ExConnection Rail - PoE

High performance PoE switches for hazardous areas. The ExConnection Rail - PoE is designed to connect our **digital PoE cameras**. The ExConnection Rail - PoE's centerpieces are high performance GigE network switches. As an option, the **FX ports can also be executed to reflect the ignition protection category [op is]**. The ExConnection Rail - PoE allows the connection of up to 16 PoE cameras. The connection of the GBit/s FX ports is possible over very large distances.

Group II (Gas & Dust)	ATEX				
Zone	0	1	2	21	22
Application	✗	✓	✓	✓	✓

Group I (Mining)	ATEX	
Category	Ma	Mb
Application	✗	✗

Product / Model	Description	
ExConnection Rail 4P T04.4-D-4PoE+-100BaseTX 	   	High performance PoE-Switch for hazardous areas. Explosion proof (Ex-d) housing for wall mounting. Explosion protection certification according to 2014/34/EU (ATEX) & IECEx Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80°C Db Protection level: IP 66 (IEC / EN 60529) Ambient temperature: $-10^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ Material: aluminum, copper-free & seawater-resistant Dimensions: 236 x 236 x 227 mm Input power: 100 VAC - 240 VAC Network input: 4 x PoE+ (10/100BaseT(X), IEEE 802.3at, max. 30W per port) Network uplink: 1 x 100BaseTX Provided cable glands: 5 x Cable gland M20x1.5 (rubber sealed) (cameras & uplink) 1 x Cable gland M25x1.5 (rubber sealed) (power supply) Please observe standard EN 60079-14! Product group: B, tariff number: 8517 6200
ExConnection Rail 8P T04.5-D-8PoE + -1000BaseTX 	   	High-performance PoE switch for hazardous areas Flameproof enclosure for wall mounting Explosion protection approval according to Directive 2014/34 / EU (ATEX) & IECEx Explosion protection (gas): Ex II 2G Ex d IIC T6 Gb Explosion protection (dust): Ex II 2D Ex tb IIIC T80 ° C Db Protection class: IP 66 (IEC / EN 60529) Ambient temperature: $-10^{\circ}\text{C} < T_{\text{amb}} < +50^{\circ}\text{C}$ Material: lacquered aluminum RAL 7032, copper-free & seawater-resistant Dimension: 285 x 285 x 230 mm Input voltage: 100 VAC - 240 VAC Network input: 8 x PoE + (10 / 100BaseT (X), IEEE 802.3at, max 30W per port) Network Uplink: 1 x 10/100/1000BaseTX (copper) Enclosed cable entries: 8 x Gland M20x1,5 (rubber seal) (cameras) 2 x Gland M25x1.5 (barriere gland) (power & uplink) Please refer to EN 60079-14! Product group: B, tariff number: 8517 6200
Options		Through combination of different accessories many further variants are available; see chapter Accessories for (Ex-) Connection Rails & Racks.

## Accessories for (Ex)Connection Rail Series



# Accessories

By combining different accessories the **(Ex)Connection Rail & Rack** Series offers much more possibilities and variants. Interface diversity makes our Connection Rails solve every digitalization task. Cameras from renowned manufacturers can be controlled via RS422 or RS485 interface network-based. Network integrations can be realized via optical fibres, copper bound Ethernet or WLAN. These transfer media can be varied as needed.

### Connection Rail

exemplary presentation

Product / Model	Description
Power Supply 230V AC / 24V DC	Our (Ex-) Connection Rails as well as the connected camera-systems can require different power supplies. Existing systems are often provided with 24V AC, modern systems with 24V DC or 230V AC. This applies to both, Connection Rails and camera systems. We are able to realize all these voltage levels for you independent from the power requirements! Send us your request. Product group: B
„WLAN“	Optional accessory <u>WLAN</u> (surcharge): For use in explosive area please note: Deviations in the ex-marking are possible! Product group: B
„I/O“	Optional accessory <u>„I/O“</u> (surcharge): With the „I/O“ package, an easy but effective communication with external devices or systems can be set up. With the binary outputs, lights and safety gates, for example, can be switched on by motion detection. With the binary outputs, external commands, such as recordings, can be transferred to the video system. Product group: B
Ethernet ST Patchfeld	Ethernet ST Patchfeld LWL [op is] in an ex-e terminal box
„Plug“	Optional accessory (surcharge): Ex-plug. All connections are pluggable. Different systems available Product group: B
„mobile“	Optional accessory (surcharge): „mobile“ The system is mounted at a portable stainless steel frame. Product group: B
Lid with Sight Glass	Optional accessory (surcharge): Sight glass Model with sight glass for simple visual check of the status LEDs Product group: B
Coating	Protective Coating / Powder coating (surcharge): Maximum corrosion resistance, additional protection under increased mechanical loading, special RAL color desired Product group: B
Housing Heating for arctic temperatures	Optional accessory heating (surcharge): Equipped with a self-regulating heater to meet extremely low temperature ranges (up to -60°C). Product group: B
BTO	Build-to-Order-Variants ... upon request

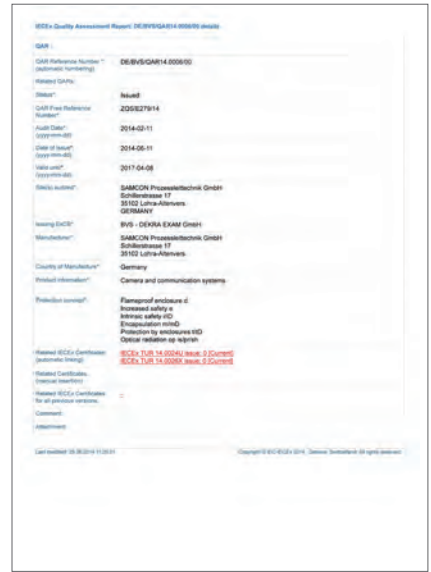
**Our Customers**

		<a href="http://WWW.SAMCON.EU">more customers at WWW.SAMCON.EU</a>		

**Our Team**



# Our Certificates



more certificates at [WWW.SAMCON.EU](http://WWW.SAMCON.EU)



# Our Type Examinations

**EG-Baumusterprüfbescheinigung**  
- Richtlinie 94/9/EG -  
Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen

**BVS 08 ATEX E 073 X**

Gerät: Kamerasystem Typ ExCan360<sup>®</sup>  
Hersteller: Samcon Prozessleittechnik GmbH  
Anschrift: 35102 Lohra-Altenvers

Die Bauart dieses Gerätes kann die verschiedenen zulässigen Ausführungen sein in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

Die TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH, bescheinigt ab dem 23. März 1994, bescheinigt, dass die Konzeption der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anlage I der Richtlinie 94/9/EG die Ergebnisse der Prüfung nach dem Prüfprotokoll BVS PP 07 2173 EG übersteigt.

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:  
EN 60079-0:2006 Allgemeine Anforderungen  
EN 60079-2:2004 Drucklose Kapazitive Ex-Sensoren  
EN 60079-28:2004 Erleuchtungen und Überwachungsgeräte die mit optischer Beaufschlagung arbeiten.

Falls das Zeichen „X“ hinter der Baumusterprüfnummer steht, sind in der Anlage zu dieser Baumusterprüfbescheinigung besondere Anforderungen an die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG zu berücksichtigen. Diese Anforderungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und die Inbetriebnahme des Gerätes und weitere Anforderungen der Richtlinie zu erfüllen, die nicht durch diese Bescheinigung abgedeckt sind.

Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:  
**II 2G Ex de [op] IB T8**

DEKRA EXAM GmbH  
Bochum, den 31. März 2008

**EG-Baumusterprüfbescheinigung**  
- Richtlinie 94/9/EG -  
Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen

**BVS 07 ATEX E 193 U**

Komponente: DECT Interface Typ ExMF  
Hersteller: Samcon Prozessleittechnik GmbH  
Anschrift: 35102 Lohra-Altenvers

Die Bauart dieser Komponente sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

Die Zertifizierungsstelle der DEKRA EXAM GmbH, bescheinigt ab dem 23. März 1994, bescheinigt, dass die Konzeption der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anlage I der Richtlinie 94/9/EG die Ergebnisse der Prüfung nach dem Prüfprotokoll BVS PP 07 2173 EG übersteigt.

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:  
IEC 60079-0:2007 Allgemeine Anforderungen  
IEC 60079-11:2007 Antennensysteme für drahtlose Übertragung von Daten und Sprachsignalen in explosionsgefährdeten Umgebungen  
IEC 60079-21:2007 Drahtlose Übertragung von Daten und Sprachsignalen in explosionsgefährdeten Umgebungen

Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und die Inbetriebnahme des Gerätes und weitere Anforderungen der Richtlinie zu erfüllen, die nicht durch diese Bescheinigung abgedeckt sind.

Die Kennzeichnung der Komponente muss die folgenden Angaben enthalten:  
**II (2) G Ex IB**

DEKRA EXAM GmbH  
Bochum, den 31. März 2008

**EG-Baumusterprüfbescheinigung**

**TÜV 09 ATEX 7697 X**

Gerät: ExCam mit Zoom Typ T83-VA... und Typ T83-20...  
Hersteller: SAMCON Prozessleittechnik GmbH  
Anschrift: Schillerstraße 11, 35102 Lohra-Altenvers

Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

Die TÜV CERT -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH, TÜV Rheinland Group, bescheinigt ab dem 23. März 1994, bescheinigt, dass die Konzeption der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anlage I der Richtlinie 94/9/EG die Ergebnisse der Prüfung nach dem Prüfprotokoll Nr. 19454957/2009 übersteigt.

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:  
EN 60079-0:2006, EN 60079-1:2007, EN 61241-0:2006, EN 61241-1:2004  
mit Ausnahme der Anforderungen, die in Punkt 18 der Anlage festgelegt sind.

Falls das Zeichen „X“ hinter der Baumusterprüfnummer steht, sind auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Baumusterprüfbescheinigung hinzuweisen.

Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und die Inbetriebnahme des Gerätes. Diese Anforderungen werden durch diese Bescheinigung nicht abgedeckt.

Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:  
**II 2G Ex d IIC T83 oder Ex d IIC T8**  
**II 2G Ex d IIC T83 or IP68**  
**II 2G Ex d IIC T83 or IP68**

TÜV CERT -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH  
Köln, den 23.04.2009

**EG-Baumusterprüfbescheinigung**

**TÜV 18 ATEX 7969 X**

Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - Richtlinie 94/9/EG

EG-Baumusterprüfbescheinigungsnummer

Gerät: ExConnection Rail Typ T94  
Hersteller: SAMCON Prozessleittechnik GmbH  
Anschrift: Schillerstraße 11, 35102 Lohra-Altenvers

Die TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH, bescheinigt ab dem 23. März 1994, bescheinigt, dass die Konzeption der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anlage I der Richtlinie 94/9/EG die Ergebnisse der Prüfung nach dem Prüfprotokoll Nr. 05754959/2010 übersteigt.

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:  
EN 60079-0:2006 EN 60079-1:2007 EN 60079-2:2007 EN 60079-18:2004  
EN 60079-28:2007 EN 61241-0:2006 EN 61241-1:2004

mit Ausnahme der Anforderungen, die in Punkt 18 der Anlage festgelegt sind.

Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und die Inbetriebnahme des Gerätes. Diese Anforderungen werden durch diese Bescheinigung nicht abgedeckt.

Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:  
**II 2G Ex d e nA [ATEX] [op] nA IIC T8**  
**II 2G Ex d e nA [ATEX] [op] nA IIC T8**

TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH  
Köln, 10. Dezember 2011

**IA - CERTIFICATE**

Issue Date: 10 December 2018  
Expiry Date: 10 December 2021  
IA Certificate Number: MASAC M/S/18-2566/18-2569

**IA - CERTIFICATE**  
Ex-Cert Series T88

This certificate is based on and must be read in conjunction with certificate BVS Ex TUR 18 0233K.

Further to your request, we have evaluated the supplied documentation:  
**The following is applicable:**

Description	Detail
Requested By:	SAMCON Prozessleittechnik GmbH Schillerstraße 11 D-35102 Lohra-Altenvers Germany
Equipment:	ExCam Series T88
Manufacturer:	SAMCON Prozessleittechnik GmbH Schillerstraße 11 D-35102 Lohra-Altenvers Germany
Model(s) / Type(s):	ExCam Series T88
Rating:	Ex II 2G T83 Ex II 2G IIC T83 Op <sup>1</sup> <sup>1</sup> See Marking below
Certification Body:	TÜV Rheinland Industrie Service GmbH
Type Certificate No.:	IECEx TUR 18 0233K
Variantation/Amendment:	0
Assessment Report No.:	CEUR/ATR/18 0233/00
Quality Assurance report (QAR) / Inspection (QIN):	DEB/DC/AR/18 0235/01

Mining And Surface Certification (Pty) Ltd Reg No: 20156291607  
101 Mt. Latta Rd., 42 Jurg Ave., Innesburg, F.F. 1, Carolina, 2007  
Tel: +27 (0) 18 29 21 884 Fax: +27 (0) 18 29 21 884  
Email: info@masac.co.za  
www.masac.co.za

**EU-TYPE EXAMINATION CERTIFICATE**

**TÜV 18 ATEX 8218 X**

Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres - Directive 94/9/EC

EU-Type Examination Certificate Number

Gerät: ExCam Series T88  
Hersteller: SAMCON Prozessleittechnik GmbH  
Anschrift: Schillerstraße 11, 35102 Lohra-Altenvers

Die TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH, bescheinigt ab dem 23. März 1994, bescheinigt, dass die Konzeption der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anlage I der Richtlinie 94/9/EG die Ergebnisse der Prüfung nach dem Prüfprotokoll Nr. 05754959/2010 übersteigt.

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:  
EN 60079-0:2006 EN 60079-1:2007 EN 60079-2:2007 EN 60079-18:2004  
EN 60079-28:2007 EN 61241-0:2006 EN 61241-1:2004

mit Ausnahme der Anforderungen, die in Punkt 18 der Anlage festgelegt sind.

Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und die Inbetriebnahme des Gerätes. Diese Anforderungen werden durch diese Bescheinigung nicht abgedeckt.

Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:  
**II 2G Ex d IIC T83 or IP68**  
**II 2G Ex d IIC T83 or IP68**

TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH  
Köln, 10. Dezember 2011

**IECEx Certificate of Conformity**

INTERNATIONAL ELECTROTECHNICAL COMMISSION  
IEC Certification Scheme for Explosive Atmospheres

Certificate No.: 0524 TUR 18 0233K  
Issue No.: Certificate 0524  
Date of Issue: 2018-07-18  
Page 1 of 2

Equipment: SAMCON Prozessleittechnik GmbH  
Schillerstraße 11  
D-35102 Lohra-Altenvers  
Germany

Technical Approval: Ex a safety sensitive series T88 UA 1 X A83

Optical Assembly: Ex II 2G

Marking: Ex II 2G Ex d IIC T83 or IP68

Approved for Issue on Behalf of the IECEx Certification Body: Samcon Prozessleittechnik GmbH

Location: Head of Certification Body

Signature (Optical assembly):  
Date:

This certificate is issued only if the following conditions are met:  
1. The certificate is not transferred and remains the property of the issuing body.  
2. The data and authenticity of this certificate may be verified by visiting the IECEx website.

Certified issued by:  
TÜV Rheinland Industrie Service GmbH  
An der StraÙe 30  
51109 Cologne  
Germany

**IEC TYPE-EXAMINATION CERTIFICATE**

**TÜV 14 ATEX 7539 X**

Equipment and Protective Systems intended for use in Potentially Explosive Atmospheres - Directive 94/9/EC

IEC Type-Examination Certificate Number

Gerät: ExCam Series T88  
Hersteller: SAMCON Prozessleittechnik GmbH  
Anschrift: Schillerstraße 11, 35102 Lohra-Altenvers

Die TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH, bescheinigt ab dem 23. März 1994, bescheinigt, dass die Konzeption der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anlage I der Richtlinie 94/9/EG die Ergebnisse der Prüfung nach dem Prüfprotokoll Nr. 05754959/2010 übersteigt.

Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:  
EN 60079-0:2006 EN 60079-1:2007 EN 60079-2:2007 EN 60079-18:2004  
EN 60079-28:2007 EN 61241-0:2006 EN 61241-1:2004

mit Ausnahme der Anforderungen, die in Punkt 18 der Anlage festgelegt sind.

Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und den Bau des bescheinigten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und die Inbetriebnahme des Gerätes. Diese Anforderungen werden durch diese Bescheinigung nicht abgedeckt.

Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:  
**II 2G Ex d IIC T83 or IP68**  
**II 2G Ex d IIC T83 or IP68**

TÜV Rheinland -Zertifizierungsstelle für Ex-Produkte der TÜV Rheinland Industrie Service GmbH  
Köln, 2014-07-28

**IECEx Certificate of Conformity**

INTERNATIONAL ELECTROTECHNICAL COMMISSION  
IEC Certification Scheme for Explosive Atmospheres

Certificate No.: 0524 TUR 18 0233K  
Issue No.: Certificate 0524  
Date of Issue: 2018-07-28  
Page 1 of 2

Equipment: SAMCON Prozessleittechnik GmbH  
Schillerstraße 11  
D-35102 Lohra-Altenvers  
Germany

Technical Approval: ExCam Series T88

Optical Assembly: Ex II 2G

Marking: Ex II 2G Ex d IIC T83 or IP68

Approved for Issue on Behalf of the IECEx Certification Body: Samcon Prozessleittechnik GmbH

Location: Head of Certification Body

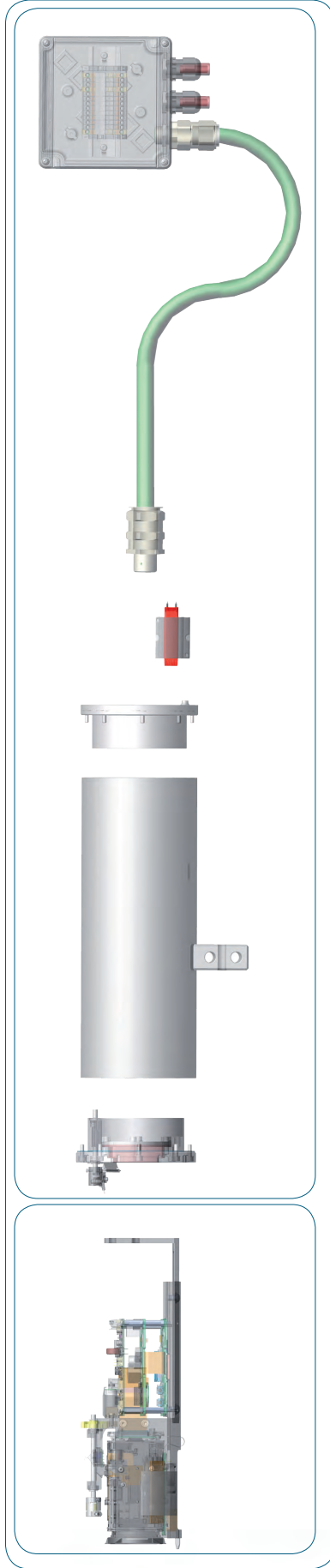
Signature (Optical assembly):  
Date:

This certificate is issued only if the following conditions are met:  
1. The certificate is not transferred and remains the property of the issuing body.  
2. The data and authenticity of this certificate may be verified by visiting the IECEx website.

Certified issued by:  
TÜV Rheinland Industrie Service GmbH  
An der StraÙe 30  
51109 Cologne  
Germany

# ExCam Series Model Key

## ExCam Series - Product - Model- Overview



### ExCam Product Model-Key

e.g.: **ExCam** **IPQ1785** → **T08-VA2.3.K3.BOR5-LL.H-005.A-T ..**

<p>→ The <b>product name</b> is a functional name of the inner setup. It leads back to the features of the camera. E.g.: <b>IPQ1785</b> is a motor-zoom-camera</p>	<p>→ The <b>enclosure-key</b>, e.g. <b>VA2.3.K3.BOR5</b> is giving us a precise description of the setup of the ex-protective housing. E.g.: <b>VA2.3</b> = stainless steel body, diameter index 2, length index: 3. <b>K3</b> = cable-entry flange #3 <b>BOR5</b> = borosilicate-window-wiper flange #5 <b>BOR3</b> = borosilicate-window flange #3</p>	<p>→ <b>Cable-Key</b> <b>005.A</b> is the cable-key. The ExCam is a plug &amp; play device for hazardous areas and comes with a cable-pigtail in accordance with DIN/VEN/IEC.. 60079-14 <b>005</b> = length in meter <b>A</b> = armored-cable <b>N</b> = non-armored-cable</p>	<p>→ <b>Termination-Key</b> <b>T</b> reflects the termination of the cable. E.g.: <b>T</b> = Terminal box termination <b>P</b> = Plug (e.g. RJ45) termination</p>
<p>→ <b>ExCam</b> is the series name for a wide range of cameras for hazardous areas. The current certification landscape is: TUEV-18-ATEX-8218X, IECEX-TUR-18.0023X, IA No: MASC MS/18-3256X</p>	<p>→ <b>To8</b> means production-type-08. T08 is part of our serial-no.-management and a direct link to our quality management system.</p>	<p>→ <b>Temperature-Key</b> <b>LL.H</b> is the temperature-key that reflects the cooling and the heating concept of the camera. E.g.: <b>N</b> = No heater / no cooling system installed <b>L</b> = Heater for moderate sub-zero degrees (e.g. -30°C) <b>LL</b> = Heater for arctic sub-zero degrees (e.g. -60°C) <b>H</b> = Modifications for hot ambient temperatures (e.g. +60°C) <b>HH</b> = Active cooling for very hot temperatures (e.g. +100°C)</p>	<p>→ ...more options can be added</p>

Notes



Rev. Date/Author: 05.09.2019/ES



**SAMCON**  
Prozessleittechnik GmbH

Schillerstrasse 17, D-35102 Lohra-Altenvers  
[www.samcon.eu](http://www.samcon.eu), [info@samcon.eu](mailto:info@samcon.eu)  
fon: +49 6426 9231-0, fax: -31