

# (1) EC TYPE-EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 94/9/EC**
- (3) EC Type-Examination Certificate Number

## TÜV 14 ATEX 7539 X

- (4) **Equipment:** ExCam Series T08
- (5) **Manufacturer:** SAMCON Prozessleittechnik GmbH
- (6) **Address:** Schillerstraße 17,  
D-35102 Lohra-Altenvers
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle for ex-protected products of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.  
  
The examination and test results are recorded in the confidential report 557/Ex539.00/14
- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:  
  
**EN 60079-0: 2012      EN 60079-1: 2007      EN 60079-31:2009      EN 60079-28: 2007**  
  
except of the requirements, which are listed under item (18).
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EC-Type-Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:



**I M2 Ex d I Mb**



**II 2 G Ex d IIC T6 Gb or Ex d IIC T5 Gb**

**II 2 G Ex d IIB T6 Gb or Ex d IIB T5 Gb**

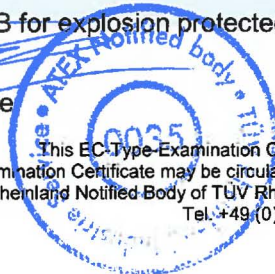


**II 2 D Ex tb IIIC T80 °C Db IP68 or II 2 D Ex tb IIIC T95 °C Db IP68**

TÜV Rheinland ExNB for explosion protected equipment

Cologne, 2014-07-29

Dipl.-Ing. Heinz Farke



This EC-Type-Examination Certificate without signature and stamp shall not be valid.  
This EC-Type-Examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the TÜV Rheinland Notified Body of TÜV Rheinland Industrie Service GmbH, Am Grauen Stein 51105 Köln  
Tel. +49 (0) 221 806-0 Fax. + 49 (0) 221 806 114

(13)

Annex to

(14)

## **EC-Type Examination Certificate**

### **TÜV 14 ATEX 7539 X**

(15)

#### **Description of equipment**

##### **15.1 Equipment and type:**

ExCam Series T08 VA1.x VA2.x

##### **15.2 Description**

General product information

The ExCam Series Type 08 is an electrical device. It is certified according to ATEX and IECEx as a pressure-resistant camera system to be used in gas and dust explosive area as well as in mines susceptible to firedamp.

At the front side, the camera systems dispose of a flange with a sight glass, on the rear side it is equipped with a flange which allows introducing ex-certified cable and cable glands or sealing plugs.

The cameras are certified to be used in ex-zones 1, 2, 21, 22 including the explosion groups IIC and IIIC and group M2 resp. Mb.

The Ex-d housings are available in different steel qualities due to which the housing's resistance towards extreme environmental conditions (sea water corrosion, high acid environments etc.) is additionally extended.

Within the pressure-resistant enclosure, various camera modules and lenses reflecting different technical specifications. Accessory components such as PTC heating elements, miniature fans, NIR LED, lighting devices, mechanical components and clamps made of aluminum are optional. Criteria for selecting the camera module are, for example, transmission technology (digital or analog), control functions (IR cut filter, iris, focus), light sensitivity, angle of view, object distance, resolution, optical zoom range, frame rate, or transmission delay. Thermal imaging applications are possible as well.

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### 15.3 Technical Data

Typ T08 VA1.2      supply voltage: 12...60V DC  
 Typ T08 VA2.2      supply voltage: 12...60V DC or 230V ( 50/60 Hz) AC

Maximum input power:

	T6			
	Tamb			
	40°C	50°C	60°C	70°C
VA1.2.x.x	18,2 W	13,6 W	9,1 W	4,5 W
VA2.2.x.x	25,0 W	18,8 W	12,5W	6,3 W

	T5				
	Tamb				
	40°C	50°C	60°C	70°C	75°C
VA1.2.x.x	20,5 W	15,9 W	11,4 W	6,8 W	4,5 W
VA2.2.x.x	28,1 W	21,9 W	15,6 W	9,4 W	6,3 W

Types T08 VA1.1 and VA 2.1 are not included.

The ambient temperature range is: - 60 °C <= Ta <= + 75°C

(16) **Test-Report No.**                      557/Ex539.00/14

(17) **Special Conditions for safe use**

The connecting cable needs a minimum length of 1 meter. The connecting cable has to be laid shielded.

External heat and/ or cooling sources have to be taken into account during the setting up. The permissible temperature range has to be observed.

When using the ExCam in the mining sector with a "high" risk of mechanical danger, it is mandatory to protect the transparent parts (Glas) of the device.

The housing of the ExCam® series must be earthed via the PA connection.

The heating has to be fused externally.

In case of repair of the flamepath forming parts see manufacturer information.

All used Cable glands and plugs have to be certified.

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(18) **Basic Safety and Health Requirements**

Covered by afore mentioned standard

TÜV Rheinland ExNB für explosion protected equipment

Cologne, 2014-07-29

  
Dipl.-Ing. Heinz Farke



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# 1<sup>st</sup> Supplement

to

## EC - Type Examination Certificate TÜV 14 ATEX 7539 X



**Device:** ExCam Series T08  
**Manufacturer:** SAMCON Prozessleittechnik GmbH  
**Address:** Schillerstraße 17,  
D-35102 Lohra-Altenvers

### Description of supplements and modifications:

Adding the Models T08-TNXCD... (BARTEC TECHNOR AS) only for Gas and Dust  
Adding the Models T08-VAx.1... (SAMCON GmbH)  
Adding the Models T08-VAx.x\*... ((SAMCON GmbH) (\* = housing protective coating))

### (15) The following modifications are valid for this 1st Supplement

Standard basis:

EN 60079-0:2012, EN 60079-1:2007, EN 60079-11:2012  
EN 60079-18:2009, EN 60079-28:2007 (Addition 1:2014-09)  
EN 60079-31:2009

Code for type of protection

*Gas:*

 II 2 G Ex d IIC T6 Gb *or* II 2 G Ex d IIC T5 Gb *or*  
 II 2 G Ex d IIB T6 Gb *or* II 2 G Ex d IIB T5 Gb

*Dust:*

 II 2 D Ex tb IIIC T80°C Db IP68 *or* II 2 D Ex tb IIIC T95°C Db IP68

*Mining:*

 I M2 Ex d I Mb

Optional and additional Type of Protection markings for all Types:

[ia] = for models with separate certified [ia] intrinsically safe circuits  
[ib] = for models with separate certified [ib] intrinsically safe circuits  
[op is] = for models with separate certified [op is] FOC connectors  
[op pr] = for models with separate certified [op pr] FOC Connectors  
mb = for models with separate certified HF Barrier

This 1st Supplement to the EC - Type Examination Certificate without signature and stamp shall not be valid.  
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Page 1 of 3 of 1st Supplement to TÜV 14 ATEX 7539 X

### 15.1 Equipment and Type

ExCam Series T08-VA...  
 ExCam Series T08-TNXCD...

### 15.2 Description

The amendment relates to the Equipment and Types:  
 ExCam Series T08-VA...  
 ExCam Series T08-TNXCD...

### 15.3 Technical Data

#### Supply Voltage:

Type: T08-VA...: 12 ... 60V DC or 240V (50/60 Hz) AC  
 Type: T08-TNXCD...: 12 ... 60V DC or 240V (50/60 Hz) AC

#### Maximum Input Power:

Type: T08-VA...:

T08-	T6 (85°C – 5K)				T5 (100°C – 15K)				
	T <sub>AMB</sub>				T <sub>AMB</sub>				
	40°C	50°C	60°C	70°C	40°C	50°C	60°C	70°C	75°C
VA1.1.x.x	17,4 W	13,0 W	8,7 W	4,3 W	19,6 W	15,2 W	10,9 W	6,5 W	4,3 W
VA1.1.x.x* (coated)	19,0 W	14,3 W	9,5 W	4,8 W	21,4 W	16,7 W	11,9 W	7,1 W	4,8 W
VA1.2.x.x	18,2 W	13,6 W	9,1 W	4,5 W	20,5 W	15,9 W	11,4 W	6,8 W	4,5 W
VA1.2.x.x* (coated)	21,1 W	15,8 W	10,5 W	5,3 W	23,7 W	18,4 W	13,2 W	7,9 W	5,3 W
VA2.1.x.x	22,2 W	16,7 W	11,1 W	5,6 W	25,0 W	19,4 W	13,9 W	8,3 W	5,6 W
VA2.1.x.x* (coated)	25,0 W	18,8 W	12,5 W	6,3 W	28,1 W	21,9 W	15,6 W	9,4 W	6,3 W
VA2.2.x.x	25,0 W	18,8 W	12,5 W	6,3 W	28,1 W	21,9 W	15,6 W	9,4 W	6,3 W
VA2.2.x.x* (coated)	26,7 W	20,0 W	13,3 W	6,7 W	30,0 W	23,3 W	16,7 W	10,0 W	6,7 W

Type: T08-TNXCD...:

T08 -	T6 (85°C – 5K)				
	T <sub>AMB</sub>				
	40°C	45°C	50°C	55°C	60°C
TNXCD	57,1 W	50,0 W	42,9 W	35,7 W	28,6 W

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**Ambient Temperature Range:**

T08-VA...:  $-60^{\circ}\text{C} \leq T_{\text{amb}} \leq +75^{\circ}\text{C}$   
T08-TNXCD...: *for Gas*  
 $-50^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$   
*for Dust*  
 $-20^{\circ}\text{C} \dots +60^{\circ}\text{C} (T_{\text{amb}})$  /with Viton O-Ring  
 $-30^{\circ}\text{C} \dots +60^{\circ}\text{C} (T_{\text{amb}})$  /with NBR 70 O-Ring  
 $-50^{\circ}\text{C} \dots +60^{\circ}\text{C} (T_{\text{amb}})$  /with VMQ-Silicon O-Ring

(16) **Test Report No.** 557/Ex 539.01/14

Parts of the device, which already fulfill the requirements for the category, were not approved and assessed by TÜV Rheinland Industrie Service.

The applicability and assembly of mechanical and electrical parts and components were assessed and approved by TÜV Rheinland Industrie Service with respect to the requirements of explosion protection.

(17) **Special conditions for safe use**

The original certificate has to be observed.

(18) **Basic Safety and Health Requirements**

Covered by mentioned standards in the original certificate.

TÜV Rheinland ExNB for explosion protected equipment

Cologne, 2015-03-31

Dipl.-Ing. Klauspeter Graff



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# (1) EU-TYPE EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 2014/34/EU**
- (3) EU-Type Examination Certificate Number

**TÜV 14 ATEX 7539X**

Issue: 02

- (4) Equipment: **ExCam Series T08**
- (5) Manufacturer: **SAMCON Prozessleittechnik GmbH**
- (6) Address: **Schillerstraße 17,  
D-35102 Lohra-Altenvers**
- (7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 2014/34/EU of 26<sup>th</sup> February 2014, certifies this product which has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report 557 / Ex 539.02 / 14

- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

<b>EN 60079-0:2012</b>	<b>EN 60079-1:2007</b>	<b>EN 60079-11:2012</b>
<b>EN 60079-18:2009</b>	<b>EN 60079-28:2015</b>	<b>EN 60079-31:2009</b>

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This EU-Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:

**Additional for VA2.0x.x:**

**Ex II 2 (1) G Ex d IIC [op is IIC T4 Ga] TX Gb**

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2018-05-16

Dipl.-Ing. Klauspeter Graffi

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(13) Annex

(14) **EU Type Examination Certificate**  
**TÜV 14 ATEX 7539 X** Issue: 02

(15) Description of equipment

15.1 Equipment and type:

ExCam Series T08

15.2 Details of Change

General product information

The Type VA2.0.x.x is now included.

Update of the standard EN 60079-0 and EN 60079-28

Technical Data

Type: T08- VA...T08-	T6 (85°C – 5K)				T5 (100°C – 15K)				
	TAMB				TAMB				
	40°C	50°C	60°C	70°C	40°C	50°C	60°C	70°C	75°C
VA2.0.x.x	18,6 W	14,0 W	9,3 W	4,7 W	20,9 W	16,3 W	11,6 W	7,0 W	4,7 W

The ambient temperature is unchanged.

(16) Test-Report No. 557 / Ex 539.02 / 14

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 Zertifizierungsstelle of TÜV Rheinland Industrie Service GmbH

(17) Special Conditions for safe use

1. Additional

When the bar code scanner is added into the VA2.0.x.x enclosure the temperature class is T4.

(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2018-05-16

Dipl.-Ing. Klauspeter Graffi



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