

EU-Type Examination Certificate



1. **EU-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**
3. **EU-Type Examination Certificate Number: ITS16ATEX18446X Issue 2**
4. **Product:** Videocamera enclosure model:
EC-940S-***-***-***-*** standard version and HD version
EC-840S-***-***-***-*** thermal version
5. **Manufacturer:** R. STAHL HMI Systems GmbH
6. **Address:** Adolf-Grimme-Allee 8
50829 Köln
Germany
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificate referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. New issues of such EC-Type Examination Certificates, and Supplementary Certificates to such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

The examination and test results are recorded in confidential Intertek Report Ref 102501558UDI-001B dated 14 March 2016, Intertek Report Ref 103339114UDI-001 dated February 2018, and Intertek Report Ref 103553297UDI-002 Issue: 00 dated: 13 June 2018.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012/A11:2013, EN 60079-1:2014 and EN 60079-31:2014 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 2G Ex db IIC Tx Gb
II 2D Ex tb IIIC Tx Db IP66/68

Tamb	Gas	Dust
-60°C up to +65°C	T5	+100°C

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V K Varma
Certification Officer
30th July 2018



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13. Description of Equipment or Protective System

The EC series explosion-proof housing has been designed for use with cameras operating in industrial environments in which there may be an explosive atmosphere due to gas, vapours, mists, or air or powder mixtures.

The EC housing is made of micro shot peened AISI 316L stainless steel. It is constituted by a cylindrical body closed by one welded front flange and one bolted rear flange.

The front flange has toughened glass window or germanium window.

The rear flange incorporates the internal slide where the camera must be positioned, it contains also the internal electronics that manages the power supply and the heating devices of the housing.

The cables entry is made through one 3/4" NPT threaded hole on the rear flange.

The EC series explosion-proof housing has an IP66/IP68 (2h, 5m) protection degree and its operating temperature is from -60°C to +65°C, depending on application.

The unit is designed for use in a fixed location, for surveillance of areas classified as zone 1-21 and zone 2-22 potentially explosive atmospheres.

Tamb	Gas	Dust
-60°C up to +65°C	T5	+100°C
-50°C up to +65°C	T5	+100°C
-60°C up to +55°C	T6	+85°C
-50°C up to +55°C	T6	+85°C

The type code is function of the model of the camera:

1. Standard;
2. With thermal camera; and
3. With High definition Camera.

The type code for the standard model and for High Definition Camera is:

EC- 940S- *** - ** * - * * * - ** *

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EMPTY: First release

B: Second release

Model:

65: T6 -50°C/+55°C

66: T6 -60°C/+55°C

55: T5 -50°C/+65°C

56: T5 -60°C/+65°C

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Connection:

0: no cable, no cable gland

*: connection devices

F: cable tail 4mt

G: cable tail 10mt

H: cable tail xx mt

I: cable tail xx mt

J: cable tail xx mt

Voltage:

2: 12-24VDC / 24VAC

Accessory

O: no accessory

W: with wiper

Video output :

A : analog

I : IP H.264

Camera:

00: without camera

**: pre-installed camera

AFZ: auto focus camera

WOC: without camera

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The type code for the Thermal camera frequency is:

EC-	840S-	*** -	**	* -	**	*	* -	** -	*	*

EMPTY:
First release

B:
Second release

Thermal camera frequency:
EMPTY: 7.5-8.3Hz
H: 25-30Hz

Model:
65: T6 -50°C/+55°C
66: T6 -60°C/+55°C
55: T5 -50°C/+65°C
56: T5 -60°C/+65°C

Connection:
0: no cable, no cable gland
*: connection devices
F: cable tail 4mt
G: cable tail 10mt
H: cable tail xx mt
I: cable tail xx mt
J: cable tail xx mt

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Voltage: 2: 12-24VDC / 24VAC
Camera 00: without camera **: pre-installed camera
Video output : A : analog I : IP H.264
Lens: 00: without camera and lens **: pre-installed lens
TIC: Thermal Imaging camera WOC: without camera

14. Report Number

Intertek Report Ref: 1035532975UDI-001 Issue: 02 Dated: 13 June 2018

15. Special Conditions of Certification

(a). Specific Conditions of Safe Use

- The max power consumption of the camera installed inside the enclosure and the dimensions shall be:

Housing	Power consumption		Max dimensions of video camera (WxHxL)	
	With video encoder	Without video encoder	With video encoder IP	Without video encoder IP

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EC-940S-***- **A-***-***-**	6W	8W	70mmx65mmx120mm	70mmx65mmx140mm
EC-840S	6W	8W	70mmx65mmx120mm	70mmx65mmx140mm
EC-940S-***- ** -***-***-**	6W	8W	70mmx65mmx100mm	70mmx65mmx140mm

- The video encoder, if present, is part of the pcb preinstalled by the manufacturer.
- It is required to use cables and cable glands, fittings or other connection element suitable for a minimum temp of +80°C.
- Specific guidance noted to contact the original manufacturer for information on the dimensions of the flameproof joints is reported in the user manual.
- The rear access cover has to be closed with eight M5x0.8 hexagon socket stainless steel screws (A4 class 70, head per ISO 4762, long 12 mm, yield stress 450 N/mm²).
- It is not possible to install video camera o component with batteries.

When the enclosure is used with a conduit, the following requirement must be satisfied: The distance from the face of the seal closest to the enclosure (or intended end-use enclosure), and the outside wall of the enclosure (or intended end-use enclosure) shall be as small as practical, but in no case more than the size of the conduit or 50 mm, whichever is the lesser.

(b). Conditions of Manufacture - Routine Tests

- Routine test for IEC 60079-1: it is required to make an overpressure at 45bar. The application of the pressure shall be at least 10s.

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18. Details of Certificate changes Issue 1

Modifications to the product covered under Issue 1:

- It has changed the company name from R. STAHL Camera Systems GmbH, Adolf-Grimme Allee 8, 50829 Köln (DE) to R. STAHL HMI Systems GmbH, Adolf-Grimme Allee 8, 50829 Köln (DE).
- It has changed the Atex marking from II 2 G Ex d IIC Tx Gb to II 2 G Ex db IIC Tx Gb.

Title:	Drawing No.:	Rev. Level:	Date:
Label drawing	LABEL DRAWING EC-940S EC-840S	00	27 November 2017
Contractual agreement EC-940S series, EC-840S series, EC-940S HD series		00	16 December 2015
Ex-proof stainless steel housing, instruction manual	MNTCMVXTHD_1749	00	Week 49 of 2017
Stahl Camera System declaration		00	21 January 2016
Stahl Camera System declaration		00	17 February 2016
Videotec declaration		00	21 January 2016
Confirming letter no technical changes		00	22 November 2017

Details of Certificate changes Issue 2

Modifications to the product covered under Issue 2:

- It has changed the last point of type code in the following:
 - EC-940s model
 - Empty: First release,
 - B: Second release
 - EC-840s model.
 - Empty: First release,
 - B: Second release
- The electronic component present inside the equipment has changed, but there are no variations on the absorbed and dissipated powers, and the free volume is not changed from the previous certification, so the explosion tests are not affected by these modifications.

Title:	Drawing No.:	Rev. Level:	Date:
Label drawing	LABEL DRAWING EC-940S EC-840S	02	15/05/2018
Instruction manual	MNTCMVXHDCAM_1820	1820	Week 20, 2018
Instruction manual	MNTCMVXTHD_1820	1820	Week 20, 2018