



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ULD 16.0005X

Issue No: 3

Certificate history:

Issue No. 3 (2018-07-23)

Issue No. 2 (2017-12-14)

Issue No. 1 (2017-07-26)

Issue No. 0 (2016-04-06)

Status: **Current**

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Date of Issue: **2018-07-23**

Applicant: **R. STAHL HMI Systems GmbH**  
Adolf-Grimme Allee 8  
50829 Köln  
**Germany**

Equipment: **Pan and Tilt CCTV Cameras - EC-940-PTZ-A\*, EC-940-PTZ-\* and EC-940-DUA-\* series**

*Optional accessory:*

Type of Protection: **Flameproof "db", Enclosure "tb"**

Marking: Ex db IIC T6 Gb Ta -40°C to +60°C

Ex tb IIIC T85°C Db Ta -40°C to +60°C

*Approved for issue on behalf of the IECEx  
Certification Body:*

Katy A. Holdredge

*Position:*

Senior Staff Engineer

*Signature:  
(for printed version)*

*Date:*

2018-07-23

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**UL International DEMKO A/S**  
Borupvang 5A,  
DK-2750 Ballerup  
Denmark





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Manufacturer: **R. STAHL HMI Systems GmbH**  
Adolf-Grimme Allee 8  
50829 Köln  
Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

## STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

## TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[DK/ULD/ExTR16.0005/03](#)

Quality Assessment Report:

[DE/BVS/QAR06.0007/09](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The EC-940-PTZ-A, EC-940-PTZ and EC-940-DUA series housings contain an integrated fully functional CCTV camera head system handling pre-set, auto pan and patrol functions with an integrated wiper. The housings are comprised of the following compartments: a static terminal compartment base, a main body providing 360° continuous pan movement and either one or two camera housings with +90° to -90° tilt movement. The EC-940-PTZ-A and EC-940-DUA series housings are both fitted with a standard day/night camera. The EC-940-PTZ is fitted with a Full HD day/night camera. The EC-940-DUA series housing is additionally fitted with an infra-red camera.

Please see Annex for additional information.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

- Contact the manufacturer for information on the dimensions of the explosion proof joints.
- The equipment is suitable for mounting vertically upright or downward orientations only.



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

Issue 1: Standards updated to latest editions.

Issue 2: Change of Applicant and Manufacturer's designation from R. STAHL Camera Systems GmbH to R. STAHL HMI Systems GmbH. Modified routine testing and updated QAR.

Issue 3: Addition of new HD night/day camera for model EC-940-PTZ-\*

**Annex:**

[Annex to IECEx ULD 16.0005X Issue 3.pdf](#)



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## TYPE DESIGNATION

The terminal compartment provides a 3/4" NPT cable entry to the side of the projecting cylinder welded to its enclosure for end user connection to either cable connectors or a conduit system depended on application. Access to the terminal enclosure for termination of supply or replacement of either of the two fitted fuses or inputs and outputs is via a threaded cover closing off the projected cylinder. The top threaded cover provides a shaft for connection to the main enclosure body, which is fitted with a slip ring constructed from ABS hard plastic, providing cable connection from the terminal compartment into the main body enclosure.

The main body is cylindrical in shape with two externally welded cylindrical spigot arms with female threaded apertures projecting from it 180° apart that can be used for connection of either a camera housing or closed off with a threaded cover. Internal circuitry consists of a thermostat board maintaining a minimum internal temperature when the equipment is powered. With one of two thermostats fitted in series switching off the circuit when the temperature is reached. The base of the main body provides a female thread for connection to the terminal compartment with the top of the main body closed off with a threaded cover.

The camera housing is cylindrical in shape with an externally projecting welded cylindrical spigot arm with a female threaded aperture. The aperture is fitted with a connecting shaft for connection to the main body. The ends of the housing are closed off with threaded covers. The front cover is fitted with a window cemented in place. The day/night camera housing is additionally fitted with an externally fitted window wiper and internally fitted with thermostat circuitry. The circuitry maintains a minimum internal temperature when the equipment is powered with one of two thermostats fitted in series switching off the circuit when the temperature is reached. The top of the housing is fitted with female threaded studs for connection of a sun shield. Internally the camera housing is fitted with an optical zoom: 36X or 28X lens camera system and control electronics.

Externally the equipment, other than the cemented windows, is manufactured from passivated, electro-polished AiSi 316L stainless steel.



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## Product Nomenclature:

Series Configuration Options:

Model: EC-940-PTZ-Aaa-bcd-ee

Where:

aa	Camera	3P	36x optical zoom, PAL
		2P	28x optical zoom, PAL
		3N	36x optical zoom, NTSC
		2N	28x optical zoom, NTSC
b	Accessory	W	With wiper
c	Voltage	1	230Vac
		2	24Vac
		3	120Vac
d	Video output	0	Analog version
		X	Integrated MPEG4 video server to control all functions via IP
		F	Integrated Single Mode video and data fiber optic transmitter
		G	Integrated Multi Mode video and data fiber optic transmitter
ee	Variation	Z	Integrated H264 video server to control all functions via IP
		**	Empty or For internal use

Model: EC-940-PTZ-aab-cdef

Where:

aa	Camera	HD	HD Camera day/night, 30x optical Zoom
		HF	HD Camera day/night, 30x high sensitivity
b	Video output	I	Integrated H264 video server to control all functions via IP
c	Accessory	W	With wiper
d	Voltage	1	230Vac
		2	24Vac
		3	120Vac
e	Release	*	Empty – first release
		B	Second release
f	Variation	**	Empty or for internal use



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The EC-940-DUA series housing is the same as the EC-940-PTZ-A above. However, it has an additional IR camera housing.

Model: EC-940-DUA-abb-cdd-eef-ghi-II

Where:

a	Type of camera	A	Analog camera day/night
bb	Camera	3P	36x optical zoom, PAL
		2P	28x optical zoom, PAL
		3N	36x optical zoom, NTSC
		2N	28x optical zoom, NTSC
c	Type of camera	A	Analog TIC camera
dd	Lens size thermal camera	35	35mm lens
		25	25mm lens
		19	19mm lens
		13	13mm lens
		09	9mm lens
ee	Thermal camera	16	Tau 160
		32	Tau 320
		33	Tau 336
		64	Tau 640
f	Wiper	W	With wiper
g	Voltage	1	230Vac
		2	24Vac
		3	120Vac
h	Video output	0	Analog version
		X	Integrated MPEG4 video server to control all functions via IP
		F	Integrated Single Mode video and data fiber optic transmitter
		G	Integrated Multi Mode video and data fiber optic transmitter
		Z	Integrated H264 video server to control all functions via IP
i	Thermal camera frequency	No code	7.5-8.3 Hz
		H	25-30 Hz
II	Variation	**	Empty or For internal use

## PARAMETERS RELATING TO THE SAFETY

Supply Voltage	Normal Usage (as detailed on product label)	Short term de-icing cycle peak maintaining a minimum internal temp at 5°C
230 Vac	0.11 A, 50-60Hz, 25.3 W	0.52 A, 50-60Hz, 120 W
24 Vac	1.08 A, 50-60Hz, 25.9 W	5 A, 50-60Hz, 120 W
120 Vac	0.21 A, 50-60Hz, 25.2 W	1 A, 50-60Hz, 120 W



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## MARKING

Marking has to be readable and indelible; it has to include the following indications:

 R. STAHL HMI Systems GmbH Adolf-Grimme Allee 8 50829 Köln Germany	  0158  T <sub>amb</sub> - 40/+60 °C	<b>DEMKO 16 ATEX 1674X</b> ⊕ II 2 G Ex db IIC T6 Gb Ta -40°C to +60°C ⊕ II 2 D Ex tb IIIC T85°C Db Ta -40°C to +60°C IP66
<b>Model:</b> <b>Serial N°:</b> <b>Electrical: **V **A 50/60Hz 120 W<sub>max</sub></b> <b>Cable entry size: 3/4" NPT</b>	<b>IECEx ULD 16.0005X</b> <b>Ex db IIC T6 Gb Ta -40°C to +60°C</b> <b>Ex tb IIIC T85°C Db Ta -40°C to +60°C</b> <b>IP66</b>	  
<b>Warning!</b> <b>Disconnect the equipment from the supply before opening.</b> <b>Do not open when explosive atmosphere may be present.</b>		

## ROUTINE EXAMINATIONS AND TESTS

Routine tests according to IEC 60079-1 cl. 16.1 are required in production of the following component parts:

- Main body enclosure, upper and lower covers
- Standard camera enclosure, body and front cover only
- Infra-red camera enclosure, body and front cover only
- Terminal compartment housing, upper and side entry covers

Each enclosure component shall be subjected to a routine overpressure test value of at least 31.2 bar for at least 10 s. There shall be no permanent deformation or damage to the enclosure.