

EU-TYPE EXAMINATION CERTIFICATE



- [1]
- [2] **Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 2014/34/EU**
- [3] EU-Type Examination Certificate Number: **DEMKO 16 ATEX 1674X Rev. 4**
- [4] Product: **Pan & Tilt CCTV cameras - EC-940-PTZ-A*, EC-940-PTZ-* and EC-940-DUA-* series and EC-94*
(with * other than 0), EC-98* and EC-84* series**
- [5] Manufacturer: **R. STAHL HMI Systems GmbH**
- [6] Address: **Adolf-Grimme Allee 8, 50829 Köln, Germany**
- [7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no. **4788884801.1.1**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014**
- [10] If the sign "X" is placed after the certificate number, it indicates that the product 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 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 the certificate.
- [12] The marking of the product shall include the following:

**II 2 G Ex db IIC T6 Gb or
Ex db IIC T6...T1 Gb**

**II 2 D Ex tb IIIC T85°C Db or
Ex tb IIIC T85°C...T450°C Db**

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2016-04-06
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Notified Body

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Schedule

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Description of Product

EC-940-PTZ-A*, EC-940-PTZ-* and EC-940-DUA-* series and EC-94* (with * other than 0), EC-98* and EC-84* series housings contain an integrated fully functional CCTV camera head system handling preset, autopan 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, EC-940-DUA and EC-98* series housings are fitted with a standard day/night camera. The EC-940-PTZ and EC-94* (with * other than 0) are fitted with a Full HD day/night camera. The EC-940-DUA and EC-98* series housing are additionally fitted with an infra-red camera. The EC-84* series housing is fitted with an infra-red camera.

The terminal compartment provides a 3/4" NPT (M25 x 1.5 as an alternative) 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. The EC-940-PTZ, EC-94* (with * other than 0) and EC-84* series are provided with only one externally welded cylindrical spigot arms. 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.

Product Nomenclature:

EC-940-PTZ-A*, EC-940-PTZ-* and EC-940-DUA-* 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
Z		Z	Integrated H264 video server to control all functions via IP
		**	Empty or for internal use
ee	Variation	**	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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Model: EC-940-DUA-abb-cdd-eef-ghi-ll

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
ll	Variation	**	Empty or for internal use

EC-94* (with * other than 0), EC-98* and EC-84* series configuration options.

Model: EC-94a-bbcccddeeee

Where:

a	Release	*	For internal use (one alphanumeric character other than 0)
bb	Voltage	V1	230Vac
		V2	24Vac
		V3	120Vac
ccc	Visible camera	***	Pre-installed visible camera (three alphanumeric character)
dd	Temperature	**	T CLASS and Ambient Temperature (two alphanumeric character)
eeee	Variation	****	For internal use (four alphanumeric character)

Model: EC-98a-bbccddddeeffggg

Where:

a	Release	*	For internal use (one alphanumeric character other than 0)
bb	Voltage	V1	230Vac
		V2	24Vac
		V3	120Vac
ccc	Visible camera	***	Pre-installed visible camera (three alphanumeric character)
dddd	Thermal camera	****	Pre-installed thermal camera (four alphanumeric character)
ee	Temperature	**	T CLASS and Ambient Temperature (two alphanumeric character)
ff	Thermal camera frequency	Y0	7.5 Hz
		Y1	30 Hz
gggg	Variation	****	For internal use (four alphanumeric character)

Model: EC-84a-bbcccddeefffff

Where:

a	Release	*	For internal use (one alphanumeric character other than 0)
bb	Voltage	V1	230Vac
		V2	24Vac
		V3	120Vac
cccc	Thermal camera	****	Pre-installed thermal camera (four alphanumeric character)
dd	Temperature	**	T CLASS and Ambient Temperature (two alphanumeric character)
ee	Thermal camera frequency	Y0	7.5 Hz
		Y1	30 Hz
ffff	Variation	****	For internal use (four alphanumeric character)

Temperature range

The ambient temperature range is as follows:

EC-940-PTZ-A*, EC-940-PTZ-* and EC-940-DUA-* series: $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ EC-94* (with * other than 0), EC-98* and EC-84* series: $-40^{\circ}\text{C} \leq T_a \leq +50^{\circ}\text{C}$ or $+55^{\circ}\text{C}$ or $+60^{\circ}\text{C}$ or $+65^{\circ}\text{C}$ or $+70^{\circ}\text{C}$ or $+75^{\circ}\text{C}$ or $+80^{\circ}\text{C}$.

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For EC-94* (with * other than 0), EC-98* and EC-84* series only:

Cable entries and field wiring must be suitable for an operating temperature as specified in the following table. The relation between maximum ambient temperature, maximum dissipated power (W) within camera housings, cable entry/branching point temperatures and the assigned temperature class/maximum surface temperature is as follows:

Temperature Class	T6/T85°C						
	50°C	55°C	60°C	65°C	70°C	75°C	80°C
T Ambient	50°C	55°C	60°C	65°C	70°C	75°C	80°C
Max. dissipated Power [W] for each camera housing	12.0	11.0	8.2	5.3	2.5	-	-
T Cable [°C]	60.9	65.3	68.7	72.1	75.5	-	-

Note: All models which meet the requirements for T6/T85°C are also permitted to be marked T5/T100°C, T4/T135°C, T3/T200°C, T2/T300°C or T1/T450°C.

Temperature Class	T5/T100°C						
	50°C	55°C	60°C	65°C	70°C	75°C	80°C
T Ambient [°C]	50°C	55°C	60°C	65°C	70°C	75°C	80°C
Max. dissipated Power [W] for each camera housing	12.0	12.0	12.0	12.0	11.0	8.2	5.3
T Cable [°C]	60.9	65.9	70.9	75.9	80.3	83.7	87.1

Note: All models which meet the requirements for T5/T100°C are also permitted to be marked T4/T135°C, T3/T200°C, T2/T300°C or T1/T450°C.

Temperature Class	T4/T135°C						
	50°C	55°C	60°C	65°C	70°C	75°C	80°C
T Ambient	50°C	55°C	60°C	65°C	70°C	75°C	80°C
Max. dissipated Power [W] for each camera housing	12.0	12.0	12.0	12.0	12.0	12.0	9.6
T Cable [°C]	60.9	65.9	70.9	75.9	80.9	85.9	89.5

Note: All models which meet the requirements for T4/T135°C are also permitted to be marked T3/T200°C, T2/T300°C or T1/T450°C.

Electrical data

Supply Voltage	Electrical ratings
230 Vac	0.52A, 50/60Hz, 120W
24 Vac	5A, 50/60Hz, 120W
120 Vac	1A, 50/60Hz, 120W

Routine tests

Routine tests according to EN 60079-1 cl. 16.3 are required in production of the following component parts:

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

Each enclosure component shall be subjected to a routine overpressure test value of at least 31.3 bar for at least 10 s. There shall be no permanent deformation or damage to the enclosure.

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Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

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Specific conditions of use:

- Contact the manufacturer for information on the dimensions of the explosion proof joints.
- The unit can be only installed in standard or inverted position.
- Ambient temperature and Surface temperature – see instructions.
- Care shall be taken to prevent accumulation of electrostatic charges. See installation instructions.

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Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The EC-940-PTZ-A*, EC-940-PTZ-* and EC-940-DUA-* series and EC-94* (with * other than 0), EC-98* and EC-84* series CCTV housings have in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529:1991+A1:2000+A2:2013.



The trademark  will be used as the company identifier on the marking label.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.