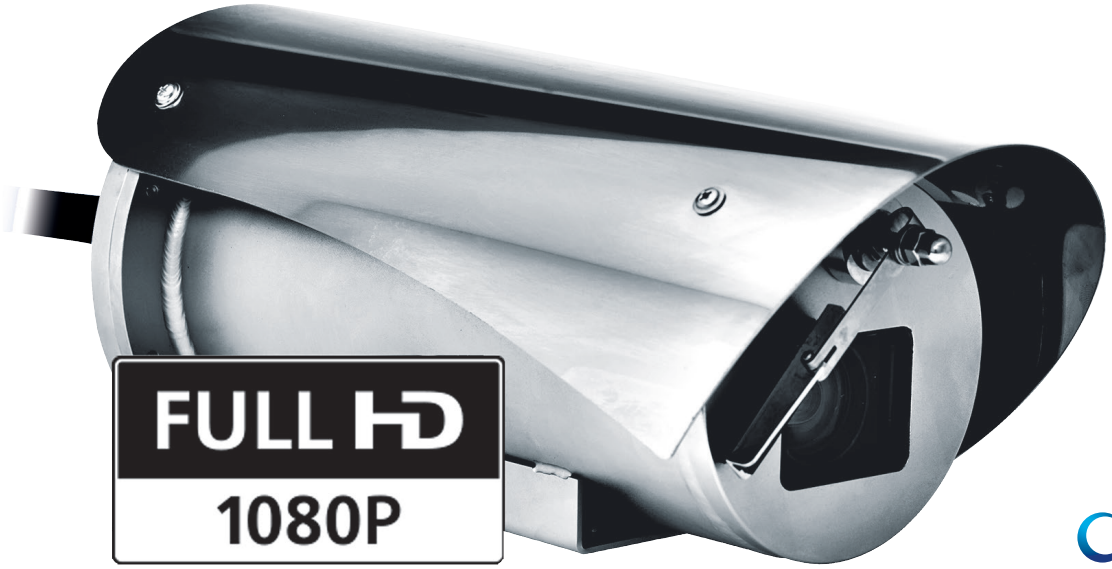
EX-PROOF HD CAMERA SERIES IN A COMPACT DESIGN

EC-940S-AFZ-HD - Series

The IP Full HD explosion protected EC-940S-AFZ-HD - Series is perfect for effective video surveillance and process control in harsh settings where the presence of gases or flammable dust can create a potentially explosive environment, a reality often found in the oil and gas industries or marine and industrial sectors. The Full HD, 1080p, 60fps, EC-940S-AFZ-HD cameras with 10x or30x motorized zoom lens for easier setup, offers multiple video streams (H.264/AVC or MJPEG) and provides exceptional image quality, picking out every detail in a scene, even in the harshest environmental conditions.
One striking advantage offered by the EC-940S-AFZ-HD cameras is its extremely easy and secure "plug and play" installation with multipolar wiring. This camera arrives ready to use, avoiding the complex electrical connections that are typical for these devices. The housing is compact yet functional and is made entirely out of AISI316L stainless steel. Its resistance to corrosion is not only guaranteed, but is also enhanced by way of polishing processes.

Another important feature of the camera is the extended temperature range of -50°C to 65°C, along with a sophisticated cold start system, which allows it to operate in harsh environments. An equally noteworthy point is, that the IP66/IP68 ratings guarantee the complete protection against harsh weather and the submersion in up to 5 metres of water for 2 hours. This camera comes with a wiper and an explosion-proof washer kit is also available, allowing for flawless, maintenance-free cleaning of the front glass. The EC-940S-AFZ-HD cameras meet every installation need, providing maximum performance and excellent value for money.



ONVIF S

MAIN FEATURES

- Electropolished and silicon micro shot peened AISI 316L stainless steel
- Certifications for use in Zones 1 and 2, IIC T5 Group (Gas) and in Zones 21 and 22, IIIC T100°C Group (Dust)
- Camera Full HD 1080p, 10x /30x Zoom, 60 frames per second (fps)
- Video compression H.264/AVC and MJPEG
- Day/Night (Auto ICR: automatic removal of IR filter)
- Autofocus
- Up to 4 simultaneous video streams
- 1 alarm input and 1 relay output
- 4m (13ft) preinstalled armored multipolar cable with cable gland (ATEX, IECEx) or alternatively 4m cable set (NEC, CEC)
- Integrated wiper
- Power supply: 12-24V DC/24V AC

CERTIFICATES

IECEx

ATEX

NEC

CEC

AMBIENT TEMPERATURE RANGE

-50°C up to +65°C

IP SAFETY

IP 66, 68 - 69 (Housing only)

251302 R3-1 - DE - 2016/12

Specifications subject change without notice. © R. STAHL Camera Systems GmbH. All rights reserved

TECHNICAL DATA

GENERAL

AISI 316L stainless steel construction
Electropolished and silicon micro shot peened external surfaces
Silicone O-ring seals
Plug and Play
4m (13ft) preinstalled armored multipolar cable with cable gland (ATEX, IECEx) or alternatively 4m cable set (NEC, CEC)

MECHANICAL

Sunshield
Integrated Wiper

Unit Weight	8kg (18lb)

HOUSING WINDOW

Thermally tempered glass

ELECTRICAL

Power supply / Current Consumption:	24V AC, 2.2A, 50/60Hz 24V DC, 2.2A 12V DC, 3.5A
I/O Alarm card:	Alarm inputs: 1 Relay outputs: 1 (1A, 30V AC/60V DC max)
Heater:	T-on 15°C ± 3°C (59°F ± 5°F) T-off 22°C ± 3°C (77°F ± 5°F)

VIDEO

Compression:	H.264/AVC, MJEPG
Number of streams:	2 independent video streams Full HD or 4 independent video streams depending on the configuration
Image resolution:	Full HD to 352x240 in 18 steps
Frame rate:	selectable from 1 up to 60 images per second (fps)

CAMERA

Image Device:	1/2.8" type Exmor CMOS sensor
Effective Pixels:	approx. 2.38 Megapixels

	10x Zoom	30x Zoom
Lens:	f=3.8mm (wide) ~ 38mm (tele) from F1.8 to F3.4	f=4.3mm (wide) ~ 129mm (tele) from F1.6 to F4.7
Zoom:	10x optical (120x with digital zoom)	30x optical (360x with digital zoom)
Horizontal Viewing Angle:	67° (wide end), 7.6° (tele end)	63.7 (wide end), up to 2.3° (tele end)
Distance:	10mm (wide) ~ 800mm (tele)	10mm (wide) ~ 1200mm (tele)

Minimum Illumination, color (ICR-OFF):	• 1.4lx, 1/30s, 50% (Normal mode) • 0.35lx, 1/30s, 50% (High sensitivity mode) • 0.19lx, 1/3s, 50% (Normal mode) • 0.05lx, 1/3s, 50% (High sensitivity mode)
Minimum Illumination, B/W (ICR-ON):	• 0.12lx, 1/30s, 50% (Normal mode) • 0.03lx, 1/30s, 50% (High sensitivity mode) • 0.002lx, 1/3s, 30% (High sensitivity mode)
Electronic shutter:	1/1 to 1/10,000s, 22 steps
White balance:	Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium vapor lamp (Fix, Auto, Outdoor Auto), One push, Manual
Gain:	Auto, Manual, Gain Limit (from 3dB up to 43dB, steps: 3dB)
Wide dynamic range:	On/Off/Visibility enhancer, Light level, Brightness compensation selection, Compensation level
Focus System:	Auto (Sensitivy: Normal,Low), One-push AF, Manual, Focus compensation with ICR on, Interval AF, Zoom trigger AF
Picture Effects:	E-Flip, Black & White, Mirror Image, Color Enhancement, Negative Art

CAMERA (continued)

Exposure Control:	Auto, EV Compensation, Manual, Priority (Shutter priority, Iris priority), Brightness, Slow AE
S/N Ratio:	50dB or more
Wide-D (wide dynamic range):	130dB
De-fog:	On/Off

NETWORK

Ethernet Connection:	IEEE 802.3 100Base-Tx

NETWORK PROTOCOLS

Protocol:	ONVIF, Profile S
Device configuration:	TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, NTP, DHCP, WS-DISCOVERY, QoS, IGMP (Multicast)
Streaming:	RTSP, RTCP, RTP

ENVIRONMENT

Environment temperature: T5: from -60°C (-76°F) up to +65°C (149°F) (versions with armoured cable) or from -50°C (-58°F) up to +65°C (149°F) (versions with cable set)

Operating temperature:

Cold start from:	-40°C (-40°F) up to +65°C (149°F)
Running from:	-50°C (-58°F) up to +65°C (149°F)

CERTIFICATIONS

ATEX (EN 60079-0: 2014, EN60079-1: 2015, EN60079-31: 2014):	II 2 G Ex d IIC T5 Gb II 2 D Ex tb IIIC T100°C Db IP66/IP68 -60°C ≤ Ta ≤ +65°C (versions with armoured cable)
	II 2 G Ex d IIC T5 Gb II 2 D Ex tb IIIC T100°C Db IP66/IP68 -50°C ≤ Ta ≤ +65°C (versions with cable set)
IECEx (IEC 60079-0: 2011Ed.6, IEC 60079-1: 2014-06 Ed.7, IEC 60079-31: 2013 Ed.2):	Ex d IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68 -60°C ≤ Ta ≤ +65°C (versions with armoured cable)
	Ex d IIC T5 Gb Ex tb IIIC T100°C Db IP66/IP68 -50°C ≤ Ta ≤ +65°C (versions with cable set)
NEC (T5, T100°C, with cable set, 50°C/ +65°C)	Class I, Zone 1, AEx d IIC T5 Gb Class I Div 2 Group A,B,C,D T5 Zone 21, AEx tb IIIC T100°C Db Class II Div 2 Group E, F and G T100°C
CEC (T5, T100°C, with cable set, 50°C/ +65°C)	Ex d IIC T5 Gb Class I Div 2 Group A,B,C,D T5 Ex tb IIIC T100°C Db Class II Div 2 Group E, F and G T100°C

ACCESSORIES (optional, all in stainless steel)

Pole adapter module EC-x40S	Order No. 251380
Corner adapter module EC-x40S	Order No. 251381
Parapet mounting bracket EC-x40S	Order No. 251386
Wall bracket EC-x40S	Order No. 251387
Ball joint x40S	Order No. 251388
Watertank 10L (ATEX)	Order No. 251366
Watertank 10L (EAC)	Order No. 251367

PACKAGE

Weight:	12.5 kg (28 lb)
Dimensions:	60x30x60 cm (24x12x24 in)

251302 R3-1 - DE - 2016/12

Specifications subject change without notice. © R. STAHL Camera Systems GmbH. All rights reserved

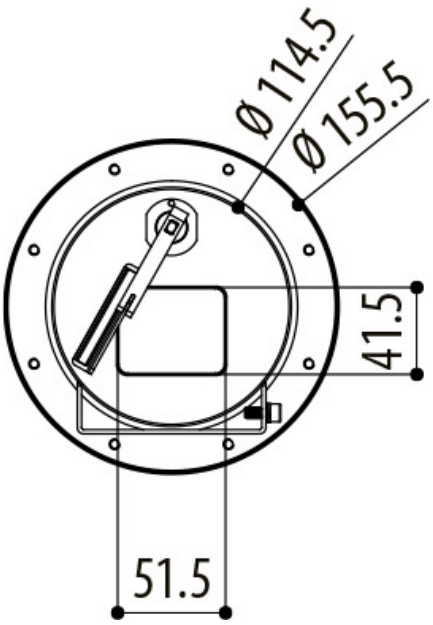
MODELS

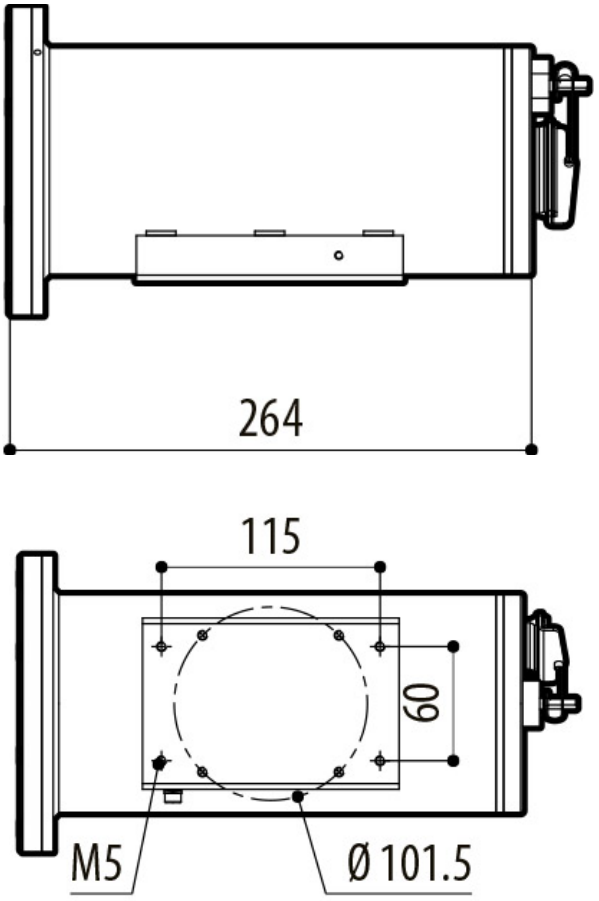
EC-940S-	**AFZ-**	**HDI** - Full HD 10x Zoom	**-W2**	**4** - 4m armoured cable	**-56** - T5 -60°C … +65°C only with armoured cable
		HEI - Full HD 30x Zoom		**F** - 4m cables for NEC/CEC	**-55** - T5 -50°C … +65°C open cable for NEC/CEC

Example: EC-940S-AFZ-HDI-W2-F55 – Camera with cable set for T5 -50°C … +65°C

TECHNICAL DRAWINGS

Sizes in millimeters





- without sunroof

251302 R3-1 - DE - 2016/12

Specifications subject change without notice. © R. STAHL Camera Systems GmbH. All rights reserved