EX-BC820v2H3 F series

Explosion-proof full-HD fixed IP camera

✓ ATEX and IECEx certified for gas and dust
✓ Single integrated flexible conduit tail
✓ Corrosion-protected 316L stainless steel
✓ Low maintenance
✓ 3-megapixel IP camera, 60 frames per second
✓ 30x optical zoom + 10 x digital zoom
✓ True Day/Night with IRC
✓ Integrated heater
✓ Optional wiper, washer tank and termination box
✓ Direct to fiber (optional)
✓ ONVIF Profile S compliant

Description
The EX-BC820v2H3 F is a 3-megapixel HD IP camera built into a fixed housing designed for use in hazardous areas in onshore, offshore, marine and heavy industrial environments. The camera housing is constructed from electro-polished 316L stainless steel for maximum corrosion protection and is fitted as standard with a sunshield and thermostatically controlled heater element.

ATEX and IECEx certified
The EX-BC820v2H3 Ex d (flame proof) housing is suited to be used in hazardous areas, zone 1, 2 for gas and zone 21, 22 for dust environments.

Integrated HD box camera
Fitted as standard, the EX-BC820v2H3 F is equipped with a 30x optical zoom, 3-megapixel (2048x1536), IP day/night camera. The 30x zoom realizes the optimum field of view in any situation. The camera is ONVIF Profile S compliant and supports the open standard (OSA) HTTP API for ease of integration.

Multistream high definition
The integrated camera has quad-stream capability for simultaneous streaming of H.264/H.264 or H.264/MJPEG. Multiple combinations of resolution and frame rate can be configured to satisfy different live viewing and recording scenarios.

Image enhancement
The camera provides automatic day/night functionality for use in low-light situations. Backlight compensation enhances the image in difficult lighting situations. The WDR-2 dual exposure mode brings out details in dark areas and details in bright areas by combining the best of two exposures.

Security Solution
In combination with Sense, TKH Security Solutions' Video Management System, the Ex cameras create a versatile CCTV solution for hazardous areas. Compatibility with other video management systems is realized by the camera's ONVIF Profile S compliance.

Washer/Wiper option
The EX-BC820v2H3 F-WW version is standard-equipped with a wiper and prepared for installing a washer hose and nozzle. A pressurised 10-litre washer tank is sold separately.

Conduit choices
To simplify installation in hazardous areas, the Ex camera is standard-fitted with a 3 m conduit, including wiring. TKH Security Solutions offers a 316L Ex e termination box for easy, but safe and secure installation. Available conduit lengths: 3, 5, or 10 m.

Direct to fiber
As an option, the camera can be fitted with a 100FX optical fiber connection. The duplex single-mode fiber is preconfigured with dual LC connectors.

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Camera housing	
Certification	ATEX, IECEx
	II 2 G Ex d op pr IIC T6
	II 2 D Ex tb IIIC T85°C Db IP66/67
Ingress protection rating	IP66/ IP67
Body material	Electro-polished 316L stainless steel
Conduit	20 mm low fire hazard, liquid tight conduit
	Galvanised steel core. Zero halogen
Glands	2x M20 Brass flameproof barrier glands, pre-assembled
Length	3 m; optional 5 or 10 m
Sunshield	Standard
Internal demister/heater	Standard
Wiper	Optional (F-WW version only)
Washer system	Optional (EX-WP10 Ex e 24 or EX-WP10 Ex d 24)
Operating temperature	-20 °C to +60 °C
"Dry heat" test	+75 °C, 2 days
Weight	
EX-BC820v2H3 F 24 3C	12 kg
EX-BC820v2H3 F-WW 24 3C	14 kg

Electrical	
Supply voltage	24 V~ 50/60 Hz; Optional 115 V~ 50/60 Hz; 230 V~ 50/60 Hz
Power consumption	25 W maximum
Electrical connections	3-wire power cable from the conduit, 0.75 mm^2

Camera	
Image sensor	1/2.8" Progressive scan CMOS
Effective pixels	2048 (H) x 1536 (V)
Shutter speed	1 - 1/10000 s
Minimum scene illumination	0.04 lux (colour), 0.002 lux (b/w), F/1.6
Dynamic range (WDR)	120 dB (in WDR-2: dual exposure mode)
Lens	30x Optical zoom, F/1.6 (W), F5 (T); 10x digital zoom
Lens focal length	4.3 mm (W) - 129 mm (T)
Horizontal field of view	67.4° (W) - 2.6° (T)
Features	Backlight compensation, auto/manual white balance,
	(3D/2D) noise, IR light compensation
Exposure	Auto (iris or shutter priority) / Manual
Day/Night (IR-cut filter)	Auto/Night/Day/Smart (with adjustable threshold levels)

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Video				
Compression algorithm(s)	H.264 (baseline / main / high profile); MJPEG			
Number of compression instances	Triple streams: Up to 3x H.264 or 2x H.264 + MJPEG			
Supported resolutions	2048x1536; 1920x1080 (1080p); 1280x1024; 1280x720 (720p); 1024x768; 800x600; 720x576 (D1); 640x480; 352x288 (CIF)			
Quad streaming:	Stream 1	Stream 2	Stream 3	Stream 4
H.264 instances in 50/60 fps (best resolution setting at 50/60 fps; higher resolution at lower frame rate possible)	1920x1080 1920x1080 1920x1080	- 720x576 640x480 (30 fps)	- - 342x288 (30 fps)	- - -
H.264 instances in 25/30 fps (best resolution setting at 25/30 fps; higher resolution at lower frame rate possible)	2048x1536 1920x1080 2048x1536 2048x1536 2048x1536 1920x1080	- 1920x1080 1280x1024 1280x1024 1280x720 1280x1024	- - - 352x288 720x576 1280x720	- - - - 352x288 352x288
H.264 instances in 25/30 fps in WDR 2 (best resolution setting at 25/30 fps; higher resolution at lower frame rate possible)	1920x1080 1920x1080 2048x1536 1920x1080	- 1920x1080 352x240 1280x720	- - - 720x480	- - - -
MJPEG	One of the above resolution formats in each instances can be MJPEG instead of H.264 if the resolution is lower than or equal to 1920x1080			
Compression bit rate control	Constant bit rate (CBR), variable bit rate (VBR)			
Output bit rate (per H.264 stream)	Up to 20480 kbit/s			
Number of video output streams	Up to 20 (RTSP)			
Total output data rate (max)	50000 kbit/s			
Video frame rate	1 to 60 fps / 1 to 50 fps			

Network	
Interface(s)	10/100 Mb Ethernet (4 wires 0.5 mm^2 from conduit)
Protocols	IPv4/v6, TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IEEE 802.1x, QoS, ONVIF
Password levels	User and Administrator
Supported browsers	Internet Explorer (6.0+), Chrome, Firefox, Safari
User accounts	20

Ordering information	
EX-BC820v2H3 F 24 3C	Ex 316L fixed IP 3MP, 30x 24Vac 3m conduit 20 mm M20
EX-BC820v2H3 F-WW 24 3C	Ex 316L fixed wiper IP 3MP, 30x 24Vac 3m conduit 20 mm M20
EX-BC820v2H3 F 24 2SM 3C	Ex 316L fixed IP 3MP, 30x 24Vac 2SM 3m conduit 20 mm M20
EX-BC820v2H3 F-WW 24 2SM 3C	Ex 316L fixed wiper IP 3MP 30x 24Vac 2SM 3m conduit 20mm M20
For 115 Vac or 230 Vac option	*Replace* 24 *with* 115 *or* 230 *respectively*
For 5 or 10 meter conduit	*Replace* 3C *with* 5C *or* 10C *respectively*

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Accessories	
EX pole mounting adapter F	316L pole mounting adapter for EX wall mounting bracket F
EX wall mounting bracket F	316L wall mounting bracket for EX fixed camera housings
EX Pole Top Mounting F	316L Pole TOP Mounting bracket for EX fixed camera housing
EX-WP10 Ex d 24 (EX-WP10 Ex e 24)	10-litre pressurised washer tank, 316L cabinet, Ex d (or Ex e) solenoid
Ex e termination box IP (Ex e termination box fiber)	316L Ex e termination box for IP camera (316L Ex e termination box for fiber cameras)

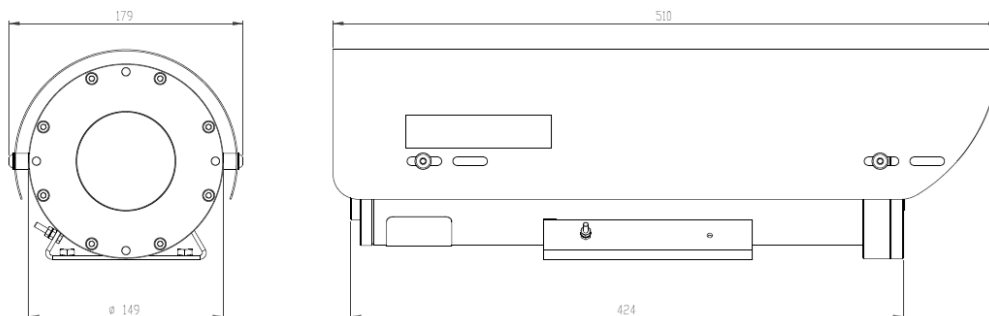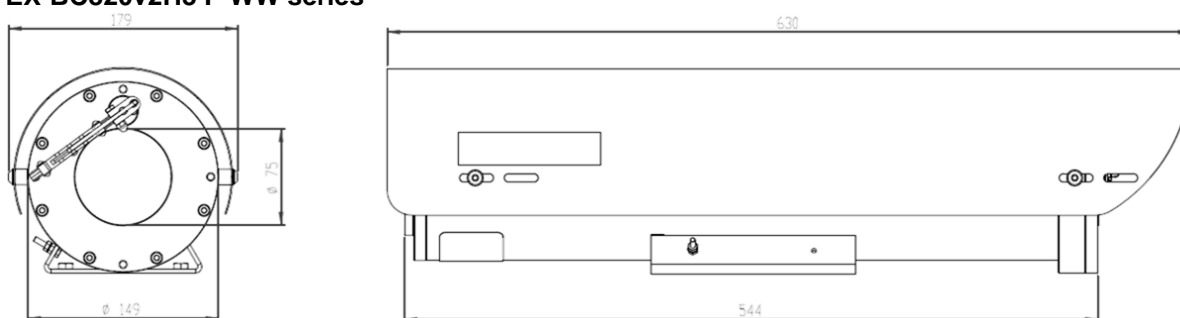| Maintenance & replacement kits	
EX/SA-MK Wiper	Maintenance kit for the wiper: Rubber blade and support
EX/SA-Wiper	Replacement for Stainless steel wiper (complete assembly)
EX-MK F	Maintenance kit EX Fixed camera: O-Ring, screws, desiccant bags

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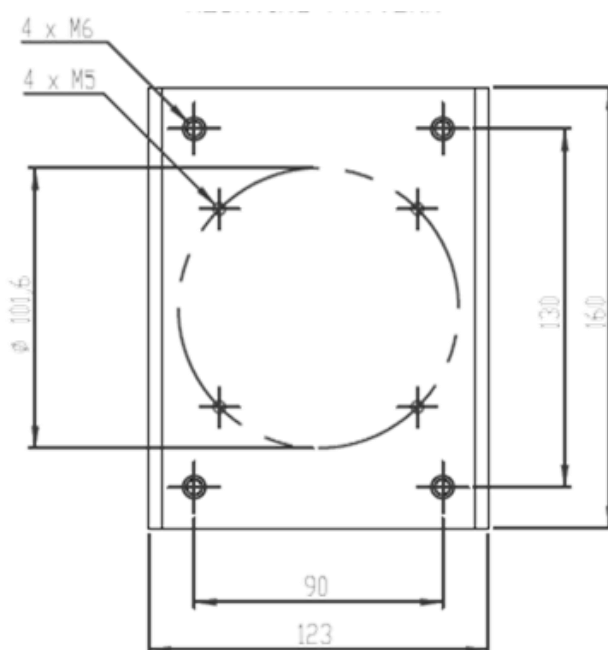
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Dimensions EX-BC820v2H3 F series

Dimensions EX-BC820v2H3 F-WW series

Mounting pattern

All dimensions in mm