avigilon™
a Motorola Solutions Company

H5A Explosion-Protected Compact Bullet Camera

6 MP

Avigilon H5A Explosion-Protected cameras are certified for explosion-rated environments according to international standards. They are designed to offer an efficient video security solution for hazardous environments that face the risk of explosions due to the presence of flammable gases or dust, including oil and gas, marine, industrial and food production sites.

The cameras feature exceptional imaging that works in conditions with poor lighting, and include next generation video analytics to offer enhanced object detection, tracking and classification.

Features

NEXT-GENERATION VIDEO ANALYTICS
Expanded object classifications and more accurate detection in crowded scenes so you can detect and act faster.

EXPLOSION PROTECTION
Heavy-duty housing custom-built for H5A cameras.

H.265 WITH HDSM SMARTCODEC™ TECHNOLOGY
Optimizes compression levels for regions in a scene to help maximize bandwidth savings, helping to keep internet connectivity costs down.

AUTOMATIC IR CUT FILTER
Exceptional imaging performance in low-light situations.

WIDE DYNAMIC RANGE
Capture details in scenes with both very bright and dark areas.

LIGHTCATCHER™ TECHNOLOGY
Offers exceptional detail in areas with low lighting.

ONVIF® COMPLIANT
Built on an open platform to allow integration with other security solutions.

HIGH TEMPERATURE RANGE
Optimized to operate reliably even at increased temperature variances.

ONVIF is a trademark of Onvif, Inc.

Specifications

IMAGE PERFORMANCE	Resolution		6.0 MP
	Image Sensor		1/1.8” progressive scan CMOS
	Max Resolution (H × V) and Aspect Ratio		(16:9) 3200 × 1800 (3:2) 3072 × 2048
	Dynamic Range	WDR Off	85 dB
		WDR On	120 dB
	Max Image Rate		50 Hz/60 Hz: 25 fps/30 fps
	3D Noise Reduction Filter		Yes
LENS	Lens		4.9-8 mm
	Minimum Illumination		0.055 lux in color mode; 0.028 lux in monochrome mode
	Horizontal Angle of View Based on Aspect Ratio		(16:9) 50°-91° (3:2) 47°-72°
	Vertical Angle of View Based on Aspect Ratio		(16:9) 29°-51° (3:2) 27°-48°
	Max Aperture		F1.8
	Control		P-Iris, remote focus and zoom
IMAGE CONTROL	Image Compression Method		H.264 HDSM SmartCodec, H.265 HDSM SmartCodec, Motion JPEG
	Streaming		Multi-stream H.264, Multi-stream H.265, Motion JPEG, HDSM™ 2.0
	Motion Detection		Pixel motion: Selectable sensitivity and threshold Classified object detection
	Camera Tamper Detection		Yes, video analytics based
	Electronic Shutter Control		Automatic, Manual (1/7 to 1/8,196 sec)
	Iris Control		Automatic, Open, Closed
	Day/Night Control		Automatic, Manual
	Flicker Control		60 Hz, 50 Hz
	White Balance		Automatic, Manual
	Backlight Compensation		Adjustable
	Privacy Zones		Up to 64 zones
NETWORK	Network		100BASE-TX, RJ45 Connector (CAT5E cabling)
	ONVIF		ONVIF compliance version 1.02, 2.00, Profile S, Profile T (www.onvif.org)
	Security		Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication
	Protocols		IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP
	Streaming Protocols		RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP
	Device Management Protocols		SNMP v2c, SNMP v3
MECHANICAL	Dimensions (LxWxH)		Camera and bracket: 254.4 mm × 177 mm × 177.5 mm; 10.0” × 6.97” × 6.99”
	Weight		Camera and bracket: 6.5 kg; 14.3 lbs With 4m cable: 8.5 kg; 18.7 lbs
	Body		AISI 316L stainless steel
	Finish		Electro-polished surface
	Adjustment Range		+30° to -90°, tilt 26° to 80°, pan
	Wiper		No
	Cable Entry		1/2” NPT
	Cable Gland		Ex db and tb 1/2” NPT (with preinstalled cable only)
	Armored Cable (Optional)		External diameter: 16.8 mm (0.66”) ± 0.4 mm (0.016”) Diameter under armature: 12.4 mm (0.49”) ± 0.3 mm (0.012”) Color: black RAL 9005 Composition: 3 × 1.5 mm² (15 AWG), and 4 × 2 × 0.51 mm² (20 AWG), (cat. 5E F/STP)
ELECTRICAL	Power Consumption		20 W with 24 VDC (0.9A) 21 W with 24 VAC (1.32A) or with IEEE802.3at
	External Power		VDC: 24 V ± 10%, VAC: 24 V ± 10%, PoE+: IEEE802.3at compliant
ENVIRONMENTAL	Operating Temperature		-40 °C to +60 °C (-40 °F to 140 °F)
	Storage Temperature		-40 °C to +55 °C (-40 °F to 131 °F)
	Cold Start		Up to 1 hour startup delay at temperature lower than -10 °C (14 °F)
	Humidity		10% - 95% non-condensing
AUXILIARY I/O	Digital I/O		No

CERTIFICATIONS	Certifications/Directives		UL, cUL, CE, RCM
	Safety		UL/CSA 62368-1, EN/IEC 62368-1
	Environmental		EN/IEC 60529: IP66, IP67, IP68, IP69 EN 60068-2-52: salt spray UL50E: 4X, 6P
	Electromagnetic Emissions		FCC Part 15 Subpart B Class B, IC ICES-003 Class B, EN 55032 Class B, EN 61000-6-3
	Electromagnetic Immunity		EN 50130-4
	Explosion Protected	ATEX	EN 60079-0, EN 60079-1, EN 60079-31
		IECEx	IEC 60079-0, IEC 60079-1, IEC 60079-31
		EAC Ex	ГОСТ IEC 60079-0, ГОСТ IEC 60079-1, ГОСТ IEC 60079-31
		KCS	Employment and Labor Department 2020-33
		Haz Loc for USA	UL 60079-0, UL 60079-1, UL 60079-31
		Haz Loc for Canada	CSA C22.2 No. 60079-0, CSA C22.2 No. 60079-1, CSA C22.2 No. 60079-31

Camera certified by Videotec S.P.A., model MMX.

Analytics Specifications

SUPPORTED ANALYTICS EVENTS	Objects in Area	The event is triggered when the selected object type moves into the region of interest.
	Object Loitering	The event is triggered when the selected object type moves into the region of interest and then stays for an extended amount of time.
	Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
	Object Appears or Enters Area	The event is triggered by each object that enters the region of interest. This event can be used to count objects.
	Object Not Present in Area	The event is triggered when no objects are present in the region of interest.
	Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.
	Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.
	Object Stops in Area	The event is triggered when an object moves into a region of interest and then stops moving for the specified threshold time.
	Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
	Tamper Detection	The event is triggered when the scene unexpectedly changes.
SUPPORTED CLASSIFIED OBJECT TYPES	Object Types in Outdoor Mode	Vehicle, sub-types: Car, Truck, Bicycle, Motorcycle, Bus Person
	Object Types in Indoor Mode	Person
TEACH BY EXAMPLE	Teach By Example	Yes, when used with Avigilon Control Center™ software
AVIGILON CONTROL CENTER (ACC) VERSIONS SUPPORTED FEATURES	ACC™ Version 6.14.10 or higher	All supported analytic events with two types of classified objects: person or vehicle. Appearance search when paired with appropriate server hardware. H.265 supported.
	ACC Version 7.2 or higher	All supported analytic events with people and vehicles and all vehicle sub-types as classified objects. Appearance search when paired with appropriate server hardware. H.265 supported.

Explosion-Protected Certifications

With cable option

Certification	Marking	Ambient Temperature
ATEX	Ex II 2 G Ex db IIB T6...T5 Gb Ex II 2 D Ex tb IIIC T85°C...T100°C Db	-40 °C to 65 °C or 70 °C
IECEx	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db	-40 °C to 65 °C or 70 °C
EAC Ex	1 Ex d IIB T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X	-40 °C to 65 °C or 70 °C

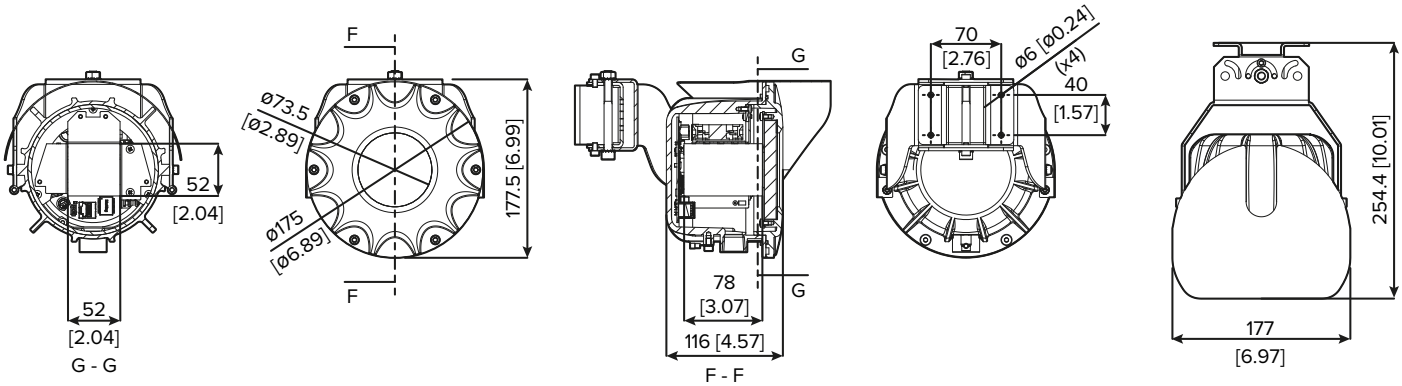
Explosion-Protected Certifications

Without cable option

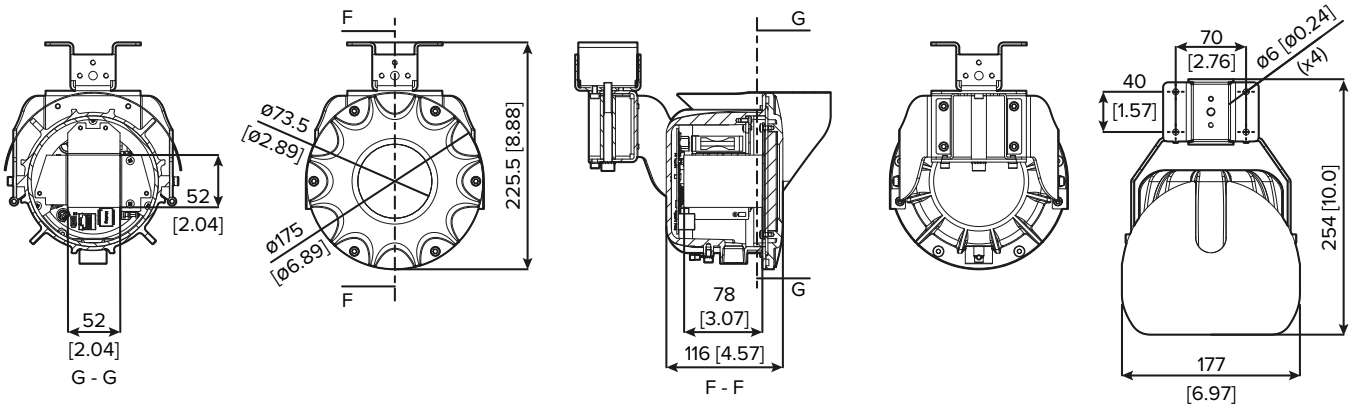
Certification	Marking	Ambient Temperature
ATEX	Ⓔx II 2 G Ex db IIB T6...T5 Gb Ⓔx II 2 D Ex tb IIIC T85°C...T100°C Db	-40 °C to 65 °C or 70 °C
IECEx	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db	-40 °C to 65 °C or 70 °C
KCs	Ex d IIB T6...T5 Ex tb IIIC T85°C...T100°C	-40 °C to 65 °C or 70 °C
EAC Ex	1 Ex d IIB T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X	-40 °C to 65 °C or 70 °C
Hazardous Location America (All versions)	Class I, Zone 1, AEx db IIB T6...T5 Zone 21, AEx tb IIIC T85°C...T100°C Db Class I, Div 2, Group C and D Class II, Div 2, Group F and G	-40 °C to 65 °C or 70 °C
Hazardous Location Canada (All versions)	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db Class I, Div 2, Group C and D Class II, Div 2, Group F and G	-40 °C to 65 °C or 70 °C

Outline Dimensions

Wall Mounting



Parapet or Ceiling Mounting

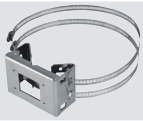


[X.X]	INCHES
X	MM

Ordering Information

	MP	Cable Type	Cable Length	WDR	Lens	Analytics	HDSM SmartCodec
6.0C-H5EX-A0-CO1	6.0	No cable	N/A	✓	4.9 - 8 mm	✓	✓
6.0C-H5EX-B0-CO1	6.0	Armored cable	4m	✓	4.9 - 8 mm	✓	✓
6.0C-H5EX-C0-CO1	6.0	Armored cable	10m	✓	4.9 - 8 mm	✓	✓

Accessories

AVGEX-MMXCWCOL		Pole mount for use with H5EX-compact bullet cameras. For pole diameters from 60 mm (2.36”) to 200 mm (7.9”). Max load 30 kg (66 lb). AISI 316L stainless steel.
AVGEX-MMXCABLARM4		Replacement 4m armored cable, with barrier gland.
AVGEX-MMXCABLARM10		Replacement 10m armored cable, with barrier gland.

Cable Glands

Type	Certification	Operating Temperature	Cable	Part Number	Diameter of the External Cable	Under Armor Cable Diameter
Barrier Cable Gland	IECEx / ATEX / EACEx	-60 °C to +135 °C	Unarmored cable	AVGEX-OCTEXB1/2P	12.5 mm – 14.0 mm	N/A
			Armored cable	AVGEX-OCTEXBA1/2P	15.5 mm – 21.1 mm	N/A
Cable Gland with Gasket	IECEx / ATEX / EACEx	-60 °C to +100 °C	Unarmored cable	AVGEX-OCTEX1/2C	3.2 mm – 8.0 mm	N/A
			Unarmored cable	AVGEX-OCTEXS1/2C	6.5 mm – 11.9 mm	N/A
			Armored cable	AVGEX-OCTEXA1/2C	12.5 mm – 20.5 mm	10.0 mm – 14.3 mm
Plug EX 1/2” NPT	IECEx / ATEX / EACEx	-100 °C to +400 °C	N/A	AVGEX-OEXPLUG1/2P	N/A	N/A

Explosion-Proof Communication Box

Communication boxes include a 3-port RJ45 and 1 SFP port Ethernet switch and 24 VAC output for powering up to:

- 2x H5EX compact bullet cameras
- 2x H5EX bullet cameras with 2x washer pump
- 1x H5EX PTZ camera with 1x washer pump

AVGEX-MBA1S5A		Aluminum housing, 230 VAC input.
AVGEX-MBA2S5A		Aluminum housing, 24 VAC input.
AVGEX-MBA3S5A		Aluminum housing, 120 VAC input.
AVGEX-MBX1MAA		AISI 316L stainless steel housing, 230 VAC input.
AVGEX-MBX2MAA		AISI 316L stainless steel housing, 24 VAC input.
AVGEX-MBX3MAA		AISI 316L stainless steel housing, 120 VAC input.
AVGEX-MBXMP		Adapter plate for communication box to AVGEX-MPXCOL or AVGEX-MPXCW mounts. AISI 316L stainless steel housing.
AVGEX-MBXWRE		Wrench for opening communication boxes, AVGEX-MBX.
AVGEX-MPXCOL		Pole mount adapter for use with AVGEX-MBXMP or H5EX PTZ cameras. For pole diameters from 110 mm (4.3”) to 150 mm (5.9”). Max load 50 kg (110 lb). AISI 316L stainless steel.
AVGEX-MPXCW		Corner mount adapter for use with AVGEX-MBXMP or H5EX PTZ cameras. Max load 50 kg (110 lb). AISI 316L stainless steel.

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