Sarix® IBP Series Environmental Bullets
UP TO 5 MP, H.265, H.264, WDR, D/N IP BULLETS WITH INTEGRATED IR

Product Features

- H.265, H.264 Main, High, MJPEG video encoding
- Up to 5 MP resolution at 30 images per second
- Up to 60 images per second (ips) at 4 MP for 5MP cameras
- Autofocus motorized remote zoom lens
- IR illumination up to 50/60/80 meters (for different lenses)
- Operating temperature up to 60°C (140°F)
- Micro SDHC and SDXC card 2 TB addressable, 128 GB testable
- Basic Analytics including Simple Motion Detection and Camera Sabotage
- 24 VAC, 12 VDC, IEEE802.3af (PoE) or IEEE802.at (PoE+)
- Pelco Smart Compression Technology
- Vandal resistant to IK10, IP66/67 ingress protection
- Compatible with Pelco & third-party video management systems
- ONVIF Profile S, Profile G, Profile Q, and Profile T conformant
- Full 3-year warranty

Sarix Professional Range

Powerful, versatile, and affordable, the **Sarix® Professional (P)** range cameras pack the most popular features and functionality of Sarix technology into a wide range of indoor and outdoor options, including bullet cameras and domes. There is also a vandal resistant wedge and box. Mix and match the performance options and form factor you need for almost any lighting condition, environment, and application.

IBP Series Bullet Camera

Within the **Sarix Professional** range, the **Sarix IBP Series** outdoor bullet cameras provide options of three kinds of a remote zoom lens for wide angle or long range surveillance needs. Autofocus capability ensures the camera can be automatically refocused when needed. Additionally, the **Sarix IBP Series** features advanced color science, true WDR, and advanced integrated adaptive IR illumination for visibility in different lighting conditions. IK10, IP66/67, and Type 4X compliance ensure enough robustness for challenging environments.

Video

Sarix Professional provide options of three kinds of simultaneous video streams. The three streams can be compressed with efficient H.265, H.264 High or Main profiles, or MJPEG formats. The streams can be configured to a variety of frame rates and variable bit rates to optimize image quality with bandwidth and storage efficiency. Pelco Smart Compression is available on both H.264 and H.265, minimizing storage and bandwidth utilization.

Edge Storage

Sarix Professional range cameras feature onboard edge storage with a micro SDHC and SDXC card. Video clips of varying lengths can be stored to the card upon alarm, or video can be written continuously to the SD card in the case of network outage. Video can be retrieved from the card through the FTP protocol or by using an ONVIF Profile G compliant client.

Open and Integrated

Sarix Professional range cameras seamlessly connect to Pelco video management systems such as VideoXpert™, VXToolbox, Endura® version 2.0 (or later), and Digital Sentry® version 7.3 (or later). **Sarix Professional** range cameras integrate with major third-party systems through the open Pelco API or the ONVIF Profile S, Profile G, Profile Q, and Profile T standards.

Standard Web Interface

Pelco cameras use a standard Web browser interface for easy remote setup and administration. Controls are optimized for convenient one-step camera configuration for features including color, exposure, flicker control, backlight compensation, and streaming.

CAMERA

Imaging Device	1/2.8-inch
Imager Type	CMOS
Imager Readout	Progressive scan
Highest Resolution	
5 MP	2592 x 1944
3 MP	2048 X 1536
2 MP	1920 x 1080
1 MP	1280 x 960
Electronic Shutter Range	1/10,000 sec ~ 1 sec
True Wide Dynamic Range	Up to 120 dB, per IEC62676
White Balance	Range: 2,000° to 10,000°K; Selectable ATW (Auto Tracing White Balance), Auto, and Manual
3D Noise Reduction	Yes (ON/OFF selectable)
Signal to Noise Ratio	≥50 dB

Minimum Illumination

MP	Lens	Sensitivity	Color		Mono		Mono (IR On)
			33 ms	200 ms	33 ms	200 ms	
1 MP	2.8 - 12 mm	f/1.4	0.0169 lux	0.00416 lux	0.01 lux	0.0025 lux	0.0 lux
2 MP	2.8 - 12 mm	f/1.4	0.0169 lux	0.00416 lux	0.01 lux	0.0025 lux	0.0 lux
2 MP	9 - 22 mm	f/1.5	0.0195 lux	0.00481 lux	0.011 lux	0.00275 lux	0.0 lux
2 MP	5 - 50 mm	f/1.6	0.0234 lux	0.00585 lux	0.013 lux	0.0032 lux	0.0 lux
3 MP	2.8 - 12 mm	f/1.4	0.065 lux	0.01625 lux	0.03 lux	0.0075 lux	0.0 lux
3 MP	5 - 50 mm	f/1.6	0.104 lux	0.026 lux	0.05 lux	0.0125 lux	0.0 lux
5 MP	2.8 - 12 mm	f/1.4	0.26 lux	0.065 lux	0.15 lux	0.0375 lux	0.0 lux
5 MP	7 - 22 mm	f/1.6	0.3 lux	0.078 lux	0.15 lux	0.0375 lux	0.0 lux

Day/Night Capabilities	Mechanical IR Cut Filter (ON/OFF/AUTO), with different set points on lux
IR Illumination	850 nm Adaptive IR up to:
	50 m (IBP131-1ER, IBP231-1ER, IBP331-1ER, IBP531-1ER),
	60 m (IBP232-1ER, IBP532-1ER),
	80 m (IBP235-1ER, IBP335-1ER);
	Auto ON in night mode, or OFF

LENS

Lens type	Built-in; varifocal
Focal Length	f/1.4 (2.8 ~ 12 mm), f/1.5 (9 ~ 22 mm), or f/1.6 (5 ~ 50 mm and 7 ~ 22 mm)
Focus	Autofocus, motorized
Zoom	Remote
Auto Iris Type	DC-Iris

Field of View*

Angle of View	IBP131 Series	IBP231 Series	IBP331 Series	IBP531 Series	IBP232 Series	IBP235 Series	IBP335 Series	IBP532 Series
Lens	2.8 ~12 mm	2.8 ~ 12 mm	2.8 ~ 12 mm	2.8 ~ 12 mm	9 ~22 mm	5 ~ 50 mm	5 ~ 50 mm	7 ~ 22 mm
Diagonal	94°~ 32°	121°~ 39°	120°~ 38°	120°~ 39°	40°~ 18°	68°~ 9°	68°~ 9°	51°~ 21°
Horizontal	72°~ 25°	101°~ 34°	90°~ 31°	90°~ 31°	35°~ 15°	60°~ 7°	57°~ 7°	40°~ 17°
Vertical	53°~ 19°	53°~ 19°	66°~ 24°	66°~ 24°	20°~ 8°	36°~ 4°	44°~ 5°	30°~ 13°

*Field of view may vary with changes in resolution settings.

VIDEO

Video Streams Up to three simultaneous streams, the second and the third stream are variable based on the setup of the primary stream

Text Overlay Camera name, time, date, and customizable text with multiple supported languages. Embedding of custom images and logos supported.

Available Resolutions

MP	Width	Height	Aspect Ratio
5.0	2592	1944	4:3
3.7	2560	1440	16:9
3.2	2048	1536	4:3
3	2304	1296	16:9
2.1	1920	1080	16:9
1.9	1600	1200	4:3
1.2	1280	960	4:3
0.9	1280	720	16:9
0.5	800	600	4:3
0.3	640	480	4:3
0.2	640	360	16:9
0.1	320	240	4:3
0.1	320	180	16:9

Frame Rates

MP	Images per Second (ips)
5 MP	60, 50, 30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1
3 MP	30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3,2, 1
2 MP	30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1
1 MP	30, 25, 20, 16.67, 15, 12.5, 10, 7.5, 5, 3, 2, 1

Note: Available frame rates are selectable for each independent stream depending on the coding, resolution, and stream configuration.

Video Encoding H.265, H.264 High and Main profiles; and MJPEG

Bit Rate Control Constant bit rate (CBR), constrained variable bit rate (CVBR) with configurable maximum value

Orientation Modes Corridor Mode, Mirror Mode, Flip Mode, Electronic image rotation 90°, 180°, and 270°

Window Blanking 8 configurable windows

Flicker Control Selectable 50 Hz or 60 Hz Modes

BASIC ANALYTICS

Sarix Professional range cameras feature basic video analytics including Simple Motion Detection and Camera Sabotage.

Simple Motion Detection algorithms allow the camera to record or send an alarm when there is motion detected in a selected zone or with the entire scene.

A Camera Sabotage alarm is triggered if the lens is obstructed or when the camera is repositioned.

PELCO'S SMART COMPRESSION TECHNOLOGY

Pelco's Smart Compression Technology lowers bandwidth and storage requirements by up to 70%. Our technology allows the user to make informed optimization between storage savings and image quality.

Pelco's Smart Compression Technology dynamically analyzes motion occurring within live video in real-time, to intelligently compress the information you don't need, while retaining details with clear quality in the areas that are important in the scene. By enabling Dynamic GOP, an added feature of Smart Compression, the number of I-frames are automatically reduced in scenes with low motion. Based on the complexity of scenes and the extent of motion, up to 70% bandwidth savings can be achieved.

AUDIO

Streaming Bi-directional full duplex

Input Line level, 3 K ohm differential w/1Vp-p maximum signal

Output Line level, 600 ohm differential w/1Vp-p

Encoding G.711 A-law/G.711 U-law

GENERAL

Construction	Aluminum, polycarbonate window
Finish	RAL 9003
Pan/Tilt Adjustment	Manual
Pan	0° ~ 355°
Tilt	0° ~ 90°
Rotate	0° ~ 355°

ELECTRICAL

Network Port	RJ-45 connector for 10/100Base-TX
Power Input	
IBP131-1ER, IBP231-1ER, IBP331-1ER, IBP531-1ER	IEEE 802.3af PoE, 18 ~ 32 VAC, 12 VDC +/-10%
IBP232-1ER, IBP235-1ER, IBP335-1ER, IBP532-1ER	IEEE802.3at PoE+, 18 ~ 32 VAC, 12 VDC +/-10%
Maximum Power Consumption	
12 VDC	29.3 W
24 VAC	36.7 W
PoE+	23 W
Local Storage	Micro SDHC or SDXC card 2 TB addressable, 128 GB testable
Alarm	
Input	1; PhotoMOS™ relay (30 V, 1 A)
Output	1; PhotoMOS™ relay (30 V, 1 A)
Triggers	Unsupervised mode that detects switch closures (Normally Open and Normally Closed)

ENVIRONMENTAL

Operating Temperature	−40° to 60°C (−40° to 140°F)
Storage Temperature	−40° to 70°C (−40° to 158°F)
Operating Humidity	5% to 95%, RH condensing
Storage Humidity	20% to 80%, RH noncondensing
Ingress Protection	IP66/67, Type 4X
Shock and Vibration Resistance	IEC 60068:2-6 and 2-27
Impact Resistance	IK10 (20 Joules)

NETWORK

Supported Protocols	TCP/IP, UDP/IP (Unicast, Multicast IGMP), UPnP, DNS, DHCP, RTP, RTSP, NTP, IPv4, IPv6, SNMP v2c/v3, QoS, HTTP, HTTPS, SSH, SSL, SMTP, FTP, 802.1x (EAP), and NTCIP 1205, GB/T28181,ARP, DDNS, ICMP, IGMP, RTCP, SFTP, SIP, TLS/TTLS, WS-discovery
Users	
Unicast	Up to 5 simultaneous users depending on resolution settings (3 guaranteed streams)
Multicast	Unlimited users H.264/H.265
Security Access	Password protected, HTTPS, IEEE 802.X, Digest Authentication, IP Filtering
Software Interface	Web browser view and setup

INTEGRATION

Video Management	VideoXpert; VXToolbox; Endura version 2.0 (or later); Digital Sentry 7.3 (or later);
Open API	Third-party VMS through Pelco API 1.0 and ONVIF Profile S, Profile G, Profile Q, and Profile T
Mobile Application	Pelco Mobile
Local Storage	Capture 1-, 5-, or 10-second video clips on camera sabotage, motion detection, or alarm input; record video continuously in the case of network outage with option to overwrite; access video through FTP protocol and ONVIF Profile G
Camera Discovery	VX Toolbox
Firmware Upgrade	Web UI or VX Toolbox
Web Browser Support	Microsoft® Internet Explorer® 8.0, Mozilla® Firefox® 3.5, Google® Chrome™ 61.0 and later
Multilingual User Interface	English, French, German, Italian, Portuguese, Arabic, Russian, Spanish, Turkish, Korean, Simplified Chinese

CERTIFICATIONS*

- CE - EN 55032 (Class A), EN 50130-4, EN 60950-1
- FCC (Class A) - 47 CFR Part 15
- UL and cUL Listed - UL 60950-1, CAN/CSA-C22.2 No. 60950-1-07
- UL/IEC/EN 60950-22
- ICES-003 (Class A)
- RCM
- KCC
- NOM
- EAC
- BIS
- Type 4X and IP66/67 rated enclosure when installed properly
- IEC 60068:2-6 and 2-27
- ONVIF Profile S, Profile G, Profile Q, and Profile T conformant

*At the time of this publication, certifications are pending. Consult the factory or www.pelco.com for the current status of certifications.

MODELS

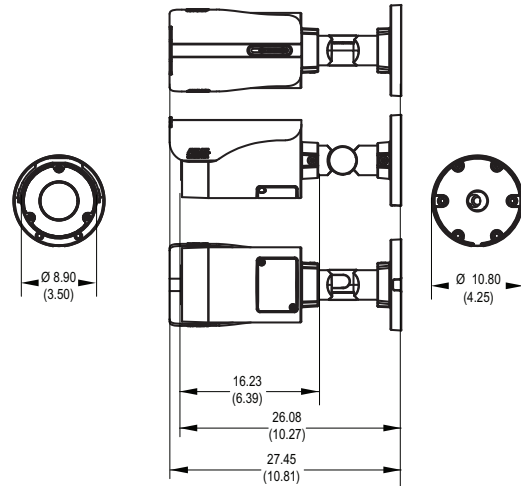| Resolution	Lens	Model Number	Description
1 MP	2.8 to 12 mm	IBP131-1ER	Sarix Pro Environmental Short-Tele Bullet
2 MP	2.8 to 12 mm	IBP231-1ER	Sarix Pro Environmental Short-Tele Bullet
2 MP	9 to 22 mm	IBP232-1ER	Sarix Pro Environmental Middle-Tele Bullet
2 MP	5 to 50 mm	IBP235-1ER	Sarix Pro Environmental Long-Tele Bullet
3 MP	2.8 to 12 mm	IBP331-1ER	Sarix Pro Environmental Short-Tele Bullet
3 MP	5 to 50 mm	IBP335-1ER	Sarix Pro Environmental Long-Tele Bullet
5 MP	2.8 to 12 mm	IBP531-1ER	Sarix Pro Environment Short-Tele Bullet
5 MP	7 to 22 mm	IBP532-1ER	Sarix Pro Environmental Middle-Tele Bullet

VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS

SARIX PRO ENVIRONMENTAL BULLET SHORT LENS
(IBP131-1ER, IBP231-1ER, IBP232-1ER, IBP331-1ER, IBP531-1ER, IBP532-1ER)

Ø 8.90
(3.50)

Ø 10.80
(4.25)

15.48
(6.09)

25.33
(9.97)

26.05
(10.26)
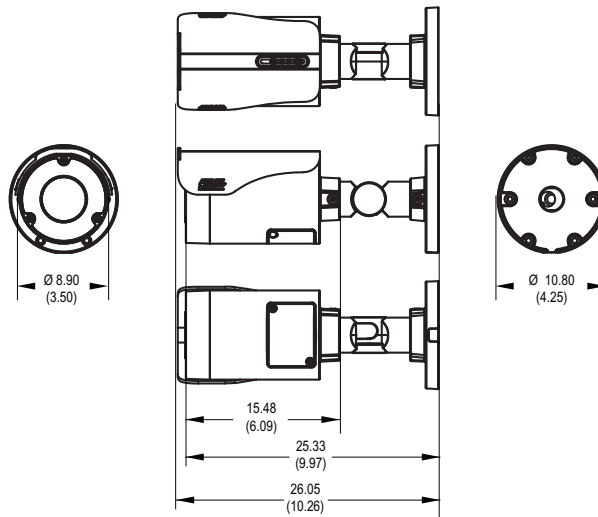
RAL 9003

SARIX PRO ENVIRONMENTAL BULLET LONG LENS
(IBP235-1ER, IBP335-1ER)

Ø 8.90
(3.50)

Ø 10.80
(4.25)

16.23
(6.39)

26.08
(10.27)

27.45
(10.81)

RAL 9003

OPTIONAL ACCESSORIES

IBP3-PLMT and IBP3-PLMT
with IBP3BBAP-ES   Pole mount
IBP3BBAP-ES   Environmental surface mount back box and adapter plate
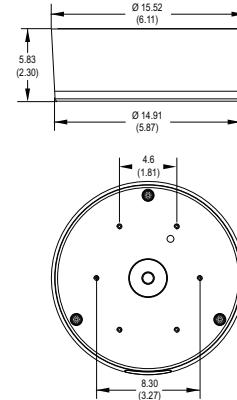IBP3BBAP-EI   In-ceiling mount

VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS

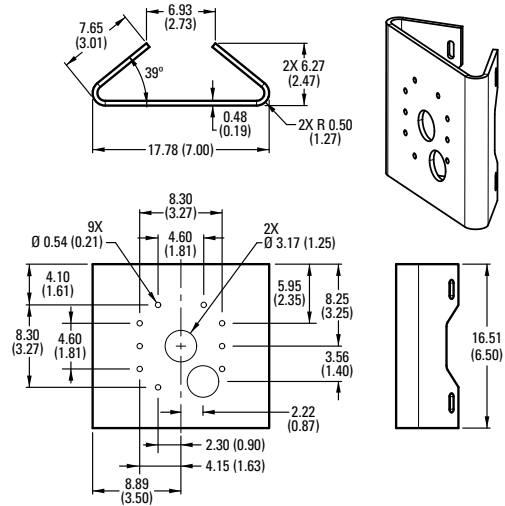**IBP3BBAP-EI ENVIRONMENTAL IN-CEILING MOUNT BACK BOX AND ADAPTER PLATE**
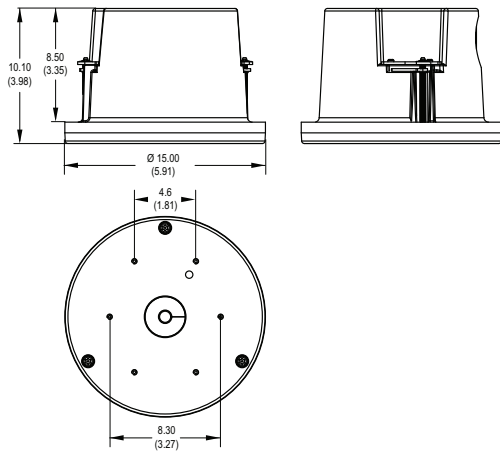
RAL 9003

IBP3BBAP-ES ENVIRONMENTAL SURFACE MOUNT BACK BOX AND ADAPTER PLATE

RAL 9003

IBP3-PLMT ENVIRONMENTAL POLE MOUNT

RAL 9003