

ExSite® Enhanced Explosionproof Camera System

HIGH RELIABILITY, FULL HD FIXED IP SYSTEMS



Driller's
Choice!

Product Features

- Up to 1920 x 1080p Resolution Wide Dynamic Range (WDR), 30x zoom lens, and Superb Low light Performance
- Dual Stream H.264 IP Video with Smart Compression
- Rated to Operate from -60 to +60° C while in Compliance to T6 Surface Temperature (<85° C) Hazardous Location Regulations
- 316L Billet Stainless Steel Electro Polished Construction
- Standard IP Ethernet Connection and Integrated Transmission Options including Fiber, Ethernet over Coax, and UTP Extension
- Full Suite of Built-In Analytics including Adaptive Motion Detection, Abandoned Object, and More
- Electronic Image Stabilization
- ONVIF Profiles S, G, and Q Conformant
- Efficient Installation with a Safety Attach Point, and Simple Wire Termination Methods.
- Dual Entry Ports to Separate Data and Power Cables



EXSITE ENHANCED FIXED SERIES

- Certifications: FCC Part 15, CE, UL/cUL, ICES-003, RCM, S-Mark, KC
- Hazardous Location Certifications: IECEx, ATEX, INMETRO, EAC Ex, CCOE, UL/cUL
- Marine Certification: DNV

ExSite Enhanced Series camera systems are designed to meet demanding explosionproof requirements, providing high reliability, ease of installation, and best-in-class imaging and technology.

The ExSite Enhanced Series is designed for rugged environmental applications including oil and LNG facilities, refineries, on and offshore drilling rigs, and on-board marine applications. Featuring rugged 316L stainless steel construction that has been subjected to extensive vibration and environmental testing make it ideal for use in the most extreme conditions of temperature, moisture, ice, and dust. The system can operate from -60° to 60°C (-76° to 140°F) while maintaining compliance to the T6 (<85°C) surface temperature specifications.

ExSite Enhanced Series cameras are easy to install and adaptable to most operational needs. The camera has dual-entry ports, allowing for separate transmission and power cables, and it is adaptable to most transmission methods via SFP/FSFP modules. ExSite Enhanced cameras support a range of input power options with a new 48 VDC option that enables installation in DC-only facilities. ExSite Enhanced cameras also come standard with wipers and sun shrouds, capturing desired video regardless of the weather.

The ExSite Enhanced Series provides industry-leading image quality using a Full HD 1080p camera with 30x zoom producing up to 60 images per second. The ExSite Enhanced system has Surevision 3.0 technology, providing excellent picture quality in the challenging lighting conditions common to hazardous areas with 130db wide dynamic range (WDR), and low-light imaging performance down to .03 lux. The camera's image defog capability increases video quality in poor visibility conditions. And with anti-bloom, 3D noise filtering, and enhanced tone mapping, ExSite Enhanced with Surevision 3.0 technology offers the finest video quality in the explosionproof market.

Specifications

Additional Features

- Integrated Wiper
- Sun Shroud, and Heater/Window Defroster
- Configurable On-Screen Displays
- 4 Alarm Inputs
- 2 Relay Outputs (1 is dedicated for the washer)
- Autofocus with Manual Override
- Auto Iris with Manual Override
- Dual cable entries for multiple data and power configurations
- Easily accessible internal microSD storage for local recording (ONVIF Profile G)
- 1000Base-T / 100Base-T ethernet and SFP/FSFP connection
- SFP/FSFP modules to support fiber, ethernet-over-coax (EoC), or UTP
- Compatible with Third Party Explosionproof Wash Systems
- Manual 360° Pan and 180° Tilt Adjustments with optional accessory mount
- Remote hard-reset capability allows for maintenance without physical access to the camera

PELCO ANALYTICS BEHAVIORS

ExSite Enhanced includes nine user-configurable behaviors, with up to three analytics behavior active at any one time.

- **Abandoned Object:** Detects objects placed within a defined zone and triggers an alarm if the object remains in the zone longer than the user-defined time allows.
- **Adaptive Motion Detection:** Detects and tracks objects that enter a scene and then triggers an alarm when the objects enter a user-defined zone.
- **Camera Sabotage:** Detects contrast changes in the field of view. This behavior triggers an alarm if the lens is obstructed by spray paint, a cloth, or lens cap or if there is any unauthorized repositioning of the camera.
- **Directional Motion:** Generates an alarm when a person or object moves in a specified direction over a user defined "trip wire" location. This behavior is often used where personnel or vehicles are supposed to enter or exit a scene going a specific direction; subjects coming from the disallowed direction will trigger the analytic alarm.
- **Loitering Detection:** Identifies when people or vehicles remain in a defined zone longer than the user-defined time allows. This behavior is effective in real-time notification of suspicious behavior in sensitive areas.
- **Object Counting:** Counts the number of objects that enter or pass through a user defined zone.
- **Object Removal:** Triggers an alarm if an object is removed from a user-defined zone.
- **Stopped Vehicle:** Detects vehicles stopped near a sensitive area longer than the user-defined time allows.

SOFTWARE FEATURES

- Multilingual menus
- Password protection
- 32 window blanks, configurable in size
- Pelco analytics including eight user-configurable behaviors
- Smart Compression, reducing bandwidth consumption while still providing high quality imaging

CAMERA/OPTICS

| | |
|--------------------------|---|
| Sensor Type | 1/2.8-inch Type Exmor CMOS Sensor |
| Optical Zoom | 30X |
| Digital Zoom | 12X |
| Maximum Resolution | 1920 x 1080 |
| Aspect Ratio | 16:9 |
| Lens | f/1.6 ~ f/4.7, focal length 4.3 mm (wide) ~ 129.0 mm (tele) |
| Horizontal Angle of View | 63.7° wide - 2.3° tele |
| Light Sensitivity* | |
| Color (33 ms) | 0.03 lux |
| Color (250 ms) | 0.008 lux |
| Mono (33 ms) | 0.004 lux |
| Mono (250 ms) | 0.001 lux |
| Day/Night Capabilities | Yes |
| Shutter Range | 1/1 ~ 1/10,000 sec |
| Signal-to-Noise Ratio | >50dB |
| IR Cut Filter | Yes |
| Wide Dynamic Range | 130 db |
| Iris Control | Auto iris with manual override |
| Backlight Compensation | Yes |
| Automatic Gain Control | Yes |
| Active Noise Filtering | Yes; 3D Noise Filtering |
| Electronic Image | |
| Stabilization (EIS) | Yes |

*Sensitivity in lux for 90% reflectance, f/1.6 (wide angle), 50 dB gain at 30 IRE (30% of signal level) with Sensitivity Boost OFF; 4X improvement to sensitivity with Sensitivity Boost ON

Specifications

VIDEO

| | |
|-----------------------|--|
| Video Encoding | H.264 High, Main, or Base profiles and MJPEG |
| Video Streams | Up to 2 simultaneous streams; the second stream is variable based on the configuration of the primary stream |
| Frame Rate | Up to 60, 30, 25, 15, 12.5, 10, 8.333, 7.5, 6, 5, 3, 2.5, 2, 1 (depending on the coding, resolution, and stream configuration) |
| Available Resolutions | |

| Resolution | | | | H.264 High Profile (IP GOP structure) | |
|------------|-------|--------|--------------|---------------------------------------|-----------------------------|
| MPx | Width | Height | Aspect Ratio | Maximum IPS | Recommended Bit Rate (Mbps) |
| 2.07 | 1920 | 1080 | 16:9 | 60 | 8.00 |
| 2.07 | 1920 | 1080 | 16:9 | 30 | 6.05 |
| 0.92 | 1280 | 720 | 16:9 | 30 | 3.00 |
| 0.36 | 800 | 448 | 16:9 | 30 | 2.00 |
| 0.23 | 640 | 352 | 16:9 | 30 | 1.80 |
| 1.23 | 1280 | 960 | 4:3 | 30 | 3.80 |
| 0.49 | 800 | 608 | 4:3 | 30 | 2.00 |
| 0.31 | 640 | 480 | 4:3 | 30 | 1.45 |
| 0.08 | 320 | 240 | 4:3 | 30 | 0.50 |

NETWORK

| | |
|--------------------------|---|
| Ethernet Interface | Ethernet (1000Base-TX or 100Base-TX) Auto MDI/MDI-X Auto-negotiate/manual setting |
| Ethernet Cabling Type | Cat5e or better |
| FSP/FSFP Interface | Supports Pelco FSP Series Transceivers (input models) and third-party MSA Compliant Transceivers |
| 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, and 802.1x (EAP) |
| Users | |
| Unicast | Up to 20 simultaneous users depending on resolution settings (2 guaranteed streams) |
| Multicast | Unlimited users H.264 |
| Security Access | Password protected |
| Software Interface | Web browser view and setup |
| Pelco System Integration | Endura 2.0, Digital Sentry 7.3 and Pelco VideoXpert 1.9 (or later) |
| Open API | Pelco API or ONVIF Profile S, G, and Q |
| Mobile Application | Integrated to Pelco Mobile App |
| Video Motion Detection | Simple motion detection and camera sabotage |
| Local Storage | SDXC, addressable to 2TB Capture 1–5–10 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 |

OPERATING TEMPERATURE*

| Operating Humidity | 10% to 100% RH (condensing) | |
|--------------------|---------------------------------|---------------|
| Storage Humidity | 10% to 100% RH (non-condensing) | |
| Temperature | Power | |
| | 48 VDC | 100-240 V |
| Sustaining | Maximum | 60°C (140°F) |
| | Minimum | -60°C (-76°F) |
| Ice Free Windows | | -35°C (-31°F) |
| Cold Start* | | -30°C (-22°F) |
| Storage | -60°C to 60°C | |
| | (-76°F to 140°F) | |

*Cold starts within 240 minutes at specified temperature

GENERAL

| | |
|--------------------------------|---|
| Construction | 316L billet electropolished stainless steel with robotic guided laser welding and 100% hydrostatic pressure testing |
| Window | High transmissivity glass |
| Sun Shroud | 316L stainless steel with laser etched logo (passivated for environmental protection) |
| Weight | EXF1230-4N: 38.0 lb (17.2 kg) EXF1230-7N: 38.0 lb (17.2 kg) |
| Effective Projected Area (EPA) | 191 in ² |
| Reset Capabilities | Internal reset button for servicability; remote hard-wire reset; remote software restart |

ELECTRICAL

| | |
|-----------------------------|--|
| Alarm | |
| Unsupervised | Detects open or closed alarm state |
| Supervised | Detects open and short alarm state with external 1-kohm resistor to detect alarm tampering |
| Input | 3.5 VDC maximum, 3.5 mA maximum |
| Relay Output | 30 VDC, 500 mA maximum |
| Input Power Options | 48 VDC, 2A or 100-240 VAC, 2A, @ 50/60 Hz |
| Input Voltage Range | ±10% |
| Power Consumption (VA / W)* | |

| Model | Description | Min (VA / W) | With Heating (VA / W) | | Max (VA / W) |
|------------|-----------------|--------------|-----------------------|---------|--------------|
| | | | @5° C | @-55° C | |
| EXF1230-4N | Fixed-48 VDC | 17 / 17 | 40 / 40 | 62 / 62 | 74 / 74 |
| EXF1230-7N | Fixed-100-240 V | 29 / 18 | 50 / 42 | 74 / 66 | 85 / 77 |

MECHANICAL

| | |
|-------------|--|
| Cable Entry | Dual 1.91 cm (0.75-inch NPT) threaded openings |
|-------------|--|

DrillVision™

Onshore, Offshore, Facilities, Pipelines

A Southern Electronics Company

2301 Julia St.
New Orleans, LA 70119
225.753.8884

www.drillvisionsystems.com