

## ExSite® Enhanced Explosionproof Camera System

### HIGH RELIABILITY, FULL HD PTZ IP SYSTEMS

#### 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
- Extremely Reliable Pan/Tilt Direct Drive Motion Control System
- Upright or Inverted Installation with Automatic Orientation Detection
- Low Latency Electronics for Improved Pan/Tilt Driveability and Safety
- Standard IP Ethernet Connection and Integrated Transmission Options including Fiber, Ethernet over Coax, and UTP Extension
- Full Suite of Built-In Analytics including AutoTracker, Adaptive Motion Detection, Abandoned Object, and More
- Electronic Image Stabilization
- Onvif Profiles S, G, and Q Conformant
- Dual Cable Entry Ports to Separate Data and Power Cables
- Efficient Installation with a Safety Attach Point, and Simple Wire Termination Methods.

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.

PTZ models include a direct-drive, beltless motor, which is highly reliable and capable of moving the camera fluidly at up to 200° per second. This motor is steady and strong enough to continue operating in hurricane-force winds, and will not be damaged if the camera is jarred by a crane or other equipment, ensuring that ExSite Enhanced will continue functioning normally in harsh weather and challenging conditions, when you need it most.



- Vari-zoom IR Illuminator Option with 200 Meter Range
- 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 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.

A vari-power, vari-zoom infrared illuminator is available as an option for applications where low light performance is essential to operational safety and security.



by Schneider Electric



International Standards  
Organization Registered Firm;  
ISO 9001 Quality System



C4042 / REVISED 11-13-18

# TECHNICAL 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 allowing 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
- FSFP modules to support your connection type of choice (fiber, ethernet-over-coax (EoC), or UTP)
- Compatible with Third Party Explosionproof Wash Systems
- Direct Drive Motor Control Automatically Accommodates for High Vibration and Windy Environments to Ensure Continuous Precision Control. (Pelco Patent Pending)
- Reliable, Maintenance-Free Brushless DC Direct Drive Stepper Motors for Smooth and Accurate Positioning
- Variable Speed Pan and Tilt up to 200°/second
- 360° Continuous Pan Rotation
- Tilt Range of +90° to -90° from Horizontal
- 256 Presets with Custom Camera Settings and Labels
- User programmable pan and tilt limits, allowing you to prevent the camera from panning or tilting into nearby equipment
- Keeps position and executes PTZ commands even in high wind conditions such as hurricanes or tropical storms
- Action on Alarm: Alarms can be individually configured for 3 priority levels, to initiate a stored tour, or to go to an associated preset when received
- Proportional Pan/Tilt: Continually decreases pan and tilt speeds in proportion to depth of zoom
- "Auto Flip" feature supports operation when mounted in an inverted position
- 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.
- **AutoTracker:** Detects and tracks movement in the field of view. When the AutoTracker behavior is configured, the system automatically pans and tilts to follow a moving object until the object stops or disappears from the monitored area. Exclusion zones can also be set to prevent the camera from tracking unwanted or unimportant targets.
- **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

- 256 presets
- 16 tours
- Multilingual menus
- Password protection
- 32 window blanks, configurable in size
- Configurable park
- Proportional pan/tilt continually decreases pan/tilt speeds in proportion to depth of zoom
- Pelco analytics including nine user-configurable behaviors
- Smart Compression, reduces 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

# TECHNICAL SPECIFICATIONS

## NETWORK

|                          |                                                                                                                                                                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interface                | Ethernet (1000Base-TX or 100Base-TX)<br>Auto MDI/MDI-X<br>Auto-negotiate/manual setting<br>FSFP Interface                                                                                                                                                   |
| Ethernet Cabling Type    | Cat5e or better                                                                                                                                                                                                                                             |
| SFP/FSFP Interface       | Supports Pelco FSFP Series Transceivers 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<br>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 |

## 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                        |

# TECHNICAL SPECIFICATIONS

## 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 (electropolished and passivated for environmental protection)           |
| Weight                         | EXP1230-4N: 71.7lb (30.3 kg)<br>EXP1230-7N: 71.7lb (30.3 kg)<br>EXP1230-7M: 89 lb (38.1 kg)                         |
| Effective Projected Area (EPA) |                                                                                                                     |
| With IR Illuminator            | 322 in <sup>2</sup>                                                                                                 |
| Without IR Illuminator         | 242 in <sup>2</sup>                                                                                                 |
| Reset Capabilities             | Internal reset button for servcability; remote hard-wire reset; remote software restart                             |

## MECHANICAL

|                       |                                                                                    |
|-----------------------|------------------------------------------------------------------------------------|
| Cable Entry           | Dual 1.91 cm (0.75-inch NPT) threaded openings                                     |
| Pan Movement          | 360 continuous pan rotation                                                        |
| Vertical Tilt         | +90° to -90° from Horizontal (with automatic re-alignment when installed inverted) |
| Pan/Tilt Speed        | 0.05°/sec to 200°/sec with proportional motion                                     |
| Preset Accuracy       | ±0.03°                                                                             |
| Wind Speeds           |                                                                                    |
| Full Motion Control   | 0-64 knots (74mph/119kmh)                                                          |
| Limited Speed Control | 65-96 knots (110mph/177kmh)                                                        |
| Hold Position         | 97-112 knots (129mph/208kmh)                                                       |
| Survives              | 113-130 knots (150mph/241kmh)                                                      |

## 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)                      | 60°C (140°F)                      |
|                         | Minimum | -60°C (-76°F)                     | -60°C (-76°F)                     |
| Ice Free Windows        |         | -40°C (-40°F)                     | -40°C (-40°F)                     |
| Cold Start <sup>†</sup> |         | -40°C (-40°F)                     | -40°C (-40°F)                     |
| Storage                 |         | -60°C to 60°C<br>(-76°F to 140°F) | -60°C to 60°C<br>(-76°F to 140°F) |

<sup>†</sup> Cold starts within 240 minutes at specified temperature

## 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 and 100-240 VAC, 2A @ 50/60 Hz                                                  |
| Input Voltage Range         | ±10%                                                                                       |
| Power Consumption (VA / W)* |                                                                                            |

| Model      | Description           | Min<br>(VA / W) | With Heating (VA / W) |           | With Wind (VA / W) |            | Typical (VA / W)    |             | Max<br>(VA / W) |
|------------|-----------------------|-----------------|-----------------------|-----------|--------------------|------------|---------------------|-------------|-----------------|
|            |                       |                 | @5° C                 | @-55° C   | @ < 20 MPH         | @ > 70 MPH | Without Illuminator | Illuminator |                 |
| EXP1230-4N | PTZ-48 VDC            | 20 / 20         | 43 / 43               | 76 / 76   | 44 / 44            | 108 / 108  | 24 / 24             | -           | 166 / 166       |
| EXP1230-7N | PTZ-100-240 V         | 30 / 20         | 52 / 45               | 88 / 80   | 54 / 46            | 121 / 113  | 32 / 25             | -           | 183 / 174       |
| EXP1230-7M | PTZ with IR-100-240 V | 30 / 23         | 55 / 47               | 158 / 148 | 61 / 53            | 88 / 80    | 32 / 28             | 59 / 51     | 220 / 211       |

# RELATED PRODUCTS

## RECOMMENDED MOUNTS

|         |                                                                                                                                                                                                   |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WXM200  | Wall mount designed to mount the ExSite Series system directly to a load-bearing vertical surface                                                                                                 |
| PXM200  | Pedestal mount designed to mount an ExSite Enhanced Series system directly to a horizontal surface in either an upright or inverted position                                                      |
| CMXM200 | Corner adapter for use with the WXM200 to mount an ExSite Series system to the corner of a structure                                                                                              |
| PAXM200 | Pole adapter for use with the WXM200 to mount a system to a vertical pole or with a PXM200 to mount a system to a horizontal pole; recommended pole diameter is 10.16 to 22.86 cm (4 to 9 inches) |

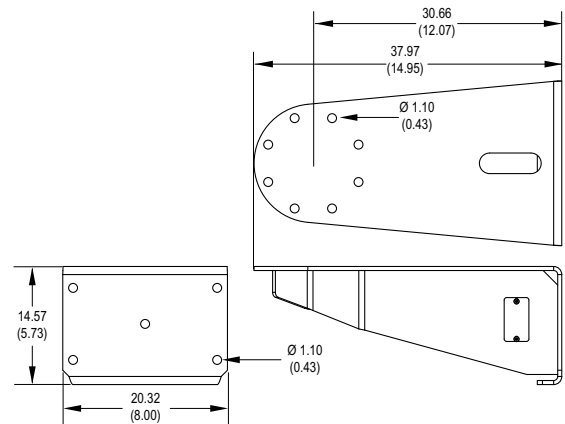
## GENERAL

|                               |                                      |
|-------------------------------|--------------------------------------|
| Construction                  |                                      |
| Mounts                        | Electropolished 316L stainless steel |
| PAXM200 Mounting Straps       | 316L stainless steel                 |
| Maximum Load                  |                                      |
| WXM200                        | 40.8 kg (90 lb)                      |
| CMXM200                       | 40.8 kg (90 lb)                      |
| PAXM200                       | 40.8 kg (90 lb)                      |
| PXM200                        | 40.8 kg (90 lb)                      |
| Unit Weight                   |                                      |
| WXM200                        | 5.7 kg (12.6 lb)                     |
| CMXM200                       | 3.71 kg (8.2 lb)                     |
| PAXM200                       | 4.17 kg (9.2 lb)                     |
| PXM200                        | 0.86 kg (1.9 lb)                     |
| Shipping Weight (approximate) |                                      |
| WXM200                        | 7.71 kg (17.0 lb)                    |
| CMXM200                       | 5.89 kg (13.0 lb)                    |
| PAXM200                       | 6.35 kg (14.0 lb)                    |
| PXM200                        | 1.81 kg (4.0 lb)                     |

| Mounting Method             | Recommended Mounting Surface                                    | Recommended Hardware                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WXM200, CMXM200, and PXM200 | Solid concrete with recommended strength of 3,600 psi or 25 Mpa | Five 3/8-16 x 1-9/16-inch long stainless steel drop-in anchors and five 3/8-16 x 1.0-inch thread length, stainless steel hex head bolts with stainless steel lock washers (not supplied)<br>Five M10x1.5x20mm, stainless steel socket head bolts with lock washers are supplied with the CMXM200 and PAXM200 for use with the WXM200 wall mount or PXM200 pedestal mount. |
|                             | Steel I beam with a minimum of 1/8-inch wall                    | Five 3/8-16 x 1.0-inch thread length, stainless steel hex head bolts with stainless steel lock washers and 3/8-16 stainless steel nuts (not supplied).                                                                                                                                                                                                                    |
| PAXM200                     | Steel pole with a diameter of 4 to 9 inches (10.16 to 22.86 cm) | Four 5/8-inch wide x 40-inch (101.6 cm) long stainless steel straps to attach the adapter to a pole (supplied).                                                                                                                                                                                                                                                           |

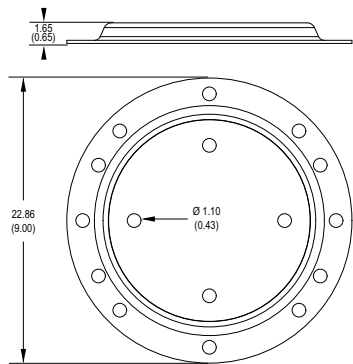
 VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.

### WXM200 WALL MOUNT

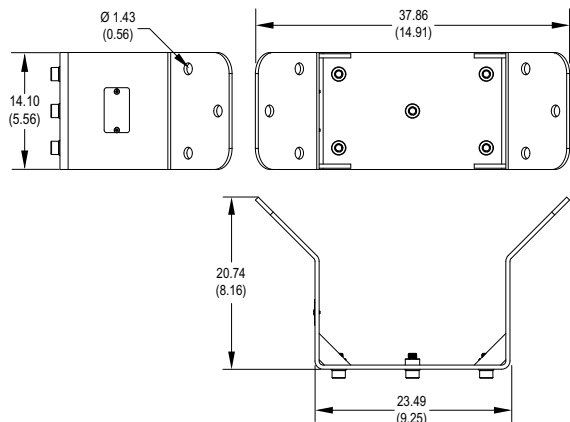
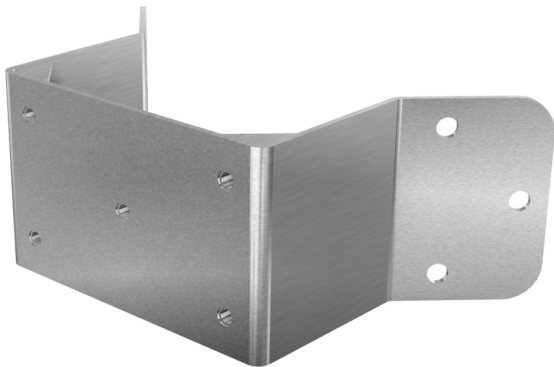


# RELATED PRODUCTS

## PXM200 PEDESTAL MOUNT

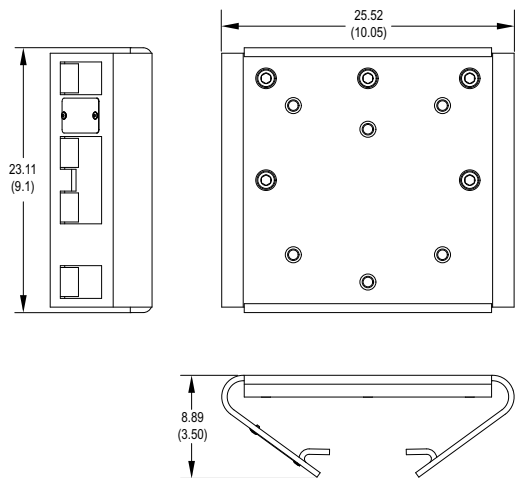


## CMXM200 CORNER ADAPTER



**Note:** Designed for use with a WXM200 wall mount.

## PAXM200 POLE ADAPTER



**Note:** Designed for use with a WXM200 to mount a system to a vertical pole or a PXM200 to mount the system to a horizontal pole. Recommended pole diameter is 10.16 to 22.86 cm (4 to 9 inches).

# RELATED PRODUCTS

## MODELS

| Model Number | PTZ/Fixed | Camera/Lens | Power                     | Illuminator    |
|--------------|-----------|-------------|---------------------------|----------------|
| EXP1230-4N   | PTZ       | 1080p 30x   | 48 VDC, 2A                | N/A            |
| EXP1230-7N   |           |             | 100-240 VAC, 2A, 50/60 Hz | N/A            |
| EXP1230-7M   |           |             | 100-240 VAC, 2A, 50/60 Hz | 850 nm near-IR |

## CERTIFICATIONS/RATINGS\*

- FCC Part 15
- CE
- UL/cUL Listed
- ICES-003
- RCM
- KC
- IP66, IP67, and IP68, and Type 4X and Type 6
- S Mark for Argentina\*
- Vibration: IEC 60068-2-6, Test Fc

## HAZARDOUS CERTIFICATIONS\*

- Tamb -60° C to +60° C
- UL/cUL Hazardous Locations Listed per NEC Zone requirement
  - CLASS I, ZONE 1, AEx db op pr IIC T6
  - AEx tb op pr IIC T85°C
  - CLASS I, ZONE 1, AEx db op is op pr IIC T6
  - AEx tb op is op pr IIC T85°C
- IECEX UL 17.0011X
  - Ex db op pr IIC T6 Gb X
  - Ex tb op pr IIC T85°C Db X
  - Ex db op is op pr IIC T6 Gb X
  - Ex tb op is op pr IIC T85°C Db X
- DEMKO 17 ATEX 1834X
  - CE 0539 II 2 G Ex db op pr IIC T6 Gb
  - II 2 D Ex tb op pr IIC T85°C Db
  - CE 0539 II 2 G Ex db op is op pr IIC T6 Gb
  - II 2 D Ex tb op is op pr IIC T85°C Db
- INMETRO\* BR-Ex d IIC T6
- EAC Ex\*
- CCOE\*

\*At the time of this publication, certifications are pending. Consult the factory or [www.pelco.com](http://www.pelco.com) for the current status of certifications.

## MARINE CERTIFICATION\*

- DNV

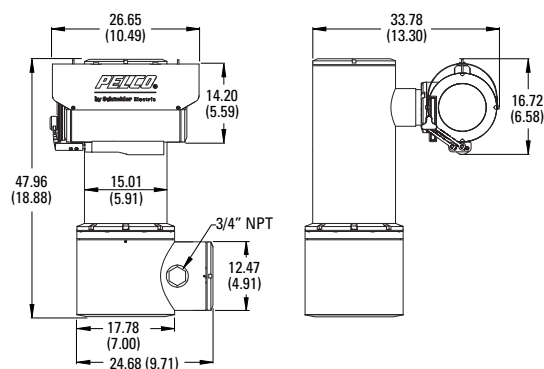
## OPTIONAL ACCESSORIES

ECPS-48VDC-5A

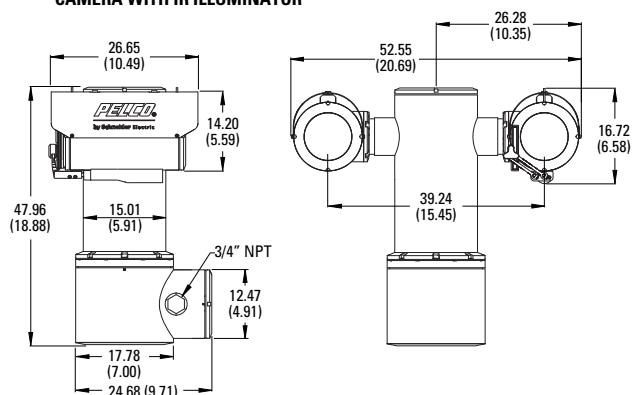
Power supply for use with EXP1230-4N

**Note:** Please contact Pelco for information on the dimensions of the flameproof joints.

### CAMERA ONLY



### CAMERA WITH IR ILLUMINATOR



VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.

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