

# BU5 Series Integrated IR Bullet Camera

## 18 TO 32 VAC (REVISION A), 1/3-INCH CCD, 650 TVL, DAY/NIGHT, VANDAL-RESISTANT

### Product Features

- 650 TV Lines
- High Sensitivity (Zero Lux with IR)
- Optical True Day/Night Function to Switch to Day or Night Mode, Depending on the Light Level
- Sony® 1/3-Inch EXview CCD II™
- Sony Digital Signal Processor (DSP), Effio-E™
- IR Compensation
- Autosensing Power; 18 to 32 VAC/12 VDC (Revision A)
- 2D Digital Noise Reduction (DNR)
- 25 Meters of IR Illumination Distance
- Weathertight Outdoor Operation (IP66)
- Rugged, Vandal-Resistant Design (IK10)
- Environmental Capability with a Wide Operating Temperature
- Privacy Zones



- Motion Detection
- Camera Titles
- Adaptive Tone Reproduction (ATR) to Compensate for Gradation of Subjects to an Optimum Level

The **BU5 Series** is Pelco's general purpose integrated IR bullet CCD camera. It uses a group of integrated infrared LEDs to deliver high quality pictures, even at night with zero illumination. Its day/night technology provides outstanding performance over a wide range of low-light conditions. The camera uses a removable infrared (IR) cut filter to switch between color and black-white modes as environmental lighting conditions change, and when the need for infrared sensitivity is realized. The **BU5 Series** also uses adaptive tone reproduction (ATR) technology to compensate for gradation of subjects to an optimum level and provides high performance video quality over a wide range of lighting conditions.

The **BU5 Series** is an ultra high resolution digital camera with 650 TVL of resolution and a minimum of 0.1 lux illumination in color mode. The **BU5 Series** is equipped with high performance IR compensation. The camera can be set manually to adjust IR illumination levels, enabling customers to change the levels of luminance and contrast according to the shooting environment. This function reduces the blooming effect and delivers clear images when objects get closer to the camera. With the included IR supplemental lighting, the **BU5 Series** operates under zero lux (monochrome mode). Camera features include autosensing power; 18 to 32 VAC or 12 VDC with internal synchronization (Revision A) and automatic gain control (AGC).

The **BU5 Series** includes automatic white balance (AWB) for difficult lighting situations, digital noise reduction (DNR) that minimizes environment noise levels to produce clear image quality, and backlight compensation (BLC) that adjusts the picture to prevent objects from appearing dark due to a strong backlight. These fine-tuning features are easily configured using the convenient on-screen menus and can be accessed using the bottom panel button. The on-screen menu also allows you to select area masking, titling, pixel correction, and preset lighting profiles, features which are not typically found in a general purpose camera.

The **BU5 Series** has a rugged, outdoor design and an impact resistance that meets the IK10 standard. The **BU5 Series** has wide operating temperature  $-30^{\circ}$  to  $50^{\circ}\text{C}$  ( $-22^{\circ}$  to  $122^{\circ}\text{F}$ ), which makes it an ideal solution for most rugged outdoor applications. The **BU5 Series** also meets weathertight IP66 standards.

The **BU5 Series** has built-in analytical capabilities including privacy zones, motion detection, and camera titles that add to its functionality and make it suitable for most applications.

Typical applications for the **BU5 Series** includes medium-range outdoor boundary surveillance that has zero light at night and a need to supplement the scene with IR light. The true day/night functionality provides the best images in low-light and IR light applications by using a black-white mode function.



by Schneider Electric

International Standards  
Organization Registered Firm;  
ISO 9001 Quality System



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# TECHNICAL SPECIFICATIONS

## MODELS

BU5-IRV12-6	High resolution IR bullet camera, 1/3-inch CCD, true day/night, 18 to 32 VAC or 12 VDC (Revision A), NTSC format
BU5-IRV12-6X	High resolution IR bullet camera, 1/3-inch CCD, true day/night, 18 to 32 VAC or 12 VDC (Revision A), PAL format

## CAMERA/OPTICS

Imaging Sensor	Sony 1/3-Inch EXview CCD II 960H	
Signal Processing	Sony DSP, Effio-E™	
Day/Night Operation	IR cut filter	
Day	BK-7 glass, same optical displacement as day mode	
Night		
Effective Pixels		
NTSC	976 (H) x 494 (V), approx. 480K	
PAL	976 (H) x 582 (V), approx. 570K	
Scanning Area	4.7 mm (H) x 3.5 mm (V) (0.19 x 0.14 inch)	
Scanning System		
NTSC	525 lines, 2:1 interlace	
PAL	625 lines, 2:1 interlace	
Scanning Frequency	Horizontal	Vertical
NTSC	15.734 kHz	59.94 Hz
PAL	15.625 kHz	50.00 Hz
Synchronization	Internal	
Horizontal Resolution	650 TVL	
Minimum Illumination	f/1.4; 2,850°K; 30 IRE	
NTSC	Color (17 ms) 0.1 lux, Mono (with IR) 0.0 lux	
PAL	Color (20 ms) 0.1 lux, Mono (with IR) 0.0 lux	
IR Cut Filter	Yes, D/N switch	
Dynamic Range	Gamma selectable (ATR)	
IR Illumination Distance	25 m	
IR Sensitivity	>40% at 850 nm, peak response	
Low-Light Technology	28 LEDs	
Electronic Shutter Range		
NTSC	Auto/manual, 1/60 ~ 1/10,000 sec	
PAL	Auto/manual, 1/50 ~ 1/10,000 sec	
Video Output	1.0 Vp-p, NTSC/PAL composite, 75 ohms, BNC connector	
Auto White Balance	2,500° to 9,500°K	
White Balance	ATW/Manual/Push/Push lock/User1/User2/Anti CR	
Signal-to-Noise Ratio	48 dB (>52 dB by parameter adjustment)	
Automatic Gain Control	Off/on/up to 36 dB, 16 levels configurable	
Lens	3.3 to 12 mm varifocal lens	
Backlight Compensation	Yes	
F-Number	f/1.4	
Focal Length	3.3 to 12 mm	
Focus Range	∞ to 0.5 m (1.6 ft)	
Angle of View	3.3 mm (wide)	12 mm (telephoto)
Horizontal	78°	24°
Vertical	57°	18°
Adjusting Angle		
Panning Range	±180°	
Tilting Range	±90°	
Rotation Range	±360°	
Digital Noise Reduction	2D	
Privacy Zones	Yes	
Motion Detection	Yes	
Camera Titles	Yes (20 characters)	

## GENERAL

Construction	Die-cast aluminum
Unit Weight	0.71 kg (1.56 lb)
Shipping Weight	1.11 kg (2.44 lb)

## ELECTRICAL

Power Requirement*	
(Revision A)	
NTSC	18 to 32 VAC/12 VDC +10% to -15%, 60 Hz
PAL	18 to 32 VAC/12 VDC +10% to -15%, 50 Hz
Power Consumption	7 W (IR on, without heater); 17.5 W (IR on, with heater on)
Power Connector	2-pin terminal block with screw terminals
Video Connector	BNC

\*Suggested installations (Revision A):

For outdoor environmental conditions from -30° to 50°C (-22° to 122°F) use only an AC power supply source (18 to 32 VAC).

For indoor or outdoor applications with ambient temperatures of 0° to 50°C (32° to 122°F), use 12 VDC power, or an AC power supply source (18 to 32 VAC).

## ENVIRONMENTAL

Operating Temperature	-30° to 50°C (-22° to 122°F)
Storage Temperature	-30° to 60°C (-22° to 140°F)
Operating/Storage Humidity	20% to 98%, noncondensing

## CERTIFICATIONS

- CE, Class B,
- FCC, Class B
- UL/cUL Listed
- Meets IP66 standards

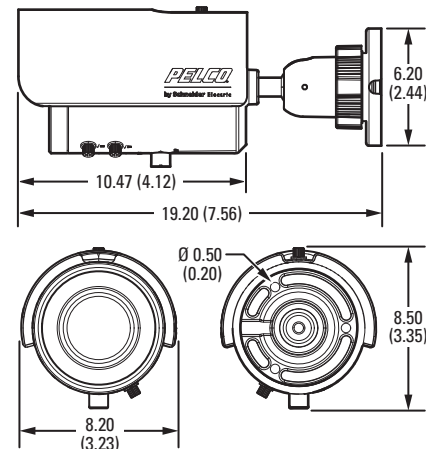
## RECOMMENDED ACCESSORIES

BU-ADAPTER	Adapter plate for mounting BU Series cameras to a wall or a ceiling surface mounted conduit box (conduit box not included)
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## RECOMMENDED POWER SUPPLIES

TF9000	Power supply for one camera, 50 VA
MCS Series	Multiple camera power supply, indoor
WCS Series	Single/multiple camera power supply, outdoor

 NOTE: VALUES IN PARENTHESES ARE INCHES; ALL OTHERS ARE CENTIMETERS.



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