

# Camclosure® IS Series Rugged Bullet Enclosure

## IS310 SERIES WALL/CEILING, WDR, DAY/NIGHT, HIGH RESOLUTION

### Product Features

- Fully-Integrated Enclosure with Camera and Lens
- 4 Camera Options:
  - Day/Night Wide Dynamic Range (WDR): Pixel-Based Imager for Accurate Color Representation, Progressive Scan
  - Day/Night High Resolution: 540 TVL
  - Wide Dynamic Range (WDR): Pixel-Based Imager for Accurate Color Representation, Progressive Scan
  - High Resolution Color: 540 TVL
- Varifocal Lens Options: 3.0-9.5 mm, 9.0-22.0 mm
- Includes Both Composite and Unshielded Twisted Pair (UTP) Outputs
- Rugged, High-Impact, Vandal-Resistant, Tamper-Resistant Hardware
- Service Connector for Video Output
- Thermostatically Controlled Heater
- Microporous Membrane Vent for Enhanced Ingress Protection
- Meets NEMA Type 4X and IP66 Standards
- Easy to Install



- Versatile, Aesthetically Pleasing Bullet Design, Mounts to Wall or Ceiling
- Concealed Cabling

### Camera Modules

The **IS310 Series Camclosure Integrated Camera System** offers a large selection of camera and lens options. Available camera modules include:

- **Day/night wide dynamic range (WDR) and wide dynamic range:** Pelco's WDR uses a pixel-based imager that adjusts for lighting by pixel. Traditional CCD cameras adjust the entire image for lighting conditions that appear in a small portion of the image or lighting conditions that are not extreme. Different lighting problems occur at night; car headlights and parking lot lights are good examples of problematic video images. Use Pelco's Day/Night WDR where you need the camera to adjust from extreme lighting to low light conditions.
- **Day/night high resolution (540 TVL) color camera with auto iris, varifocal lens:** Application examples include environments that require monochrome images at night and color images during the day.
- **High resolution (540 TVL) color camera with auto iris, varifocal lens:** Application examples include all general-purpose environments.

### Enclosure Module

The **IS310 Series Camclosure® Integrated Camera System** incorporates a camera and lens package into a small, unobtrusive enclosure. The system is quick and easy to install in a variety of indoor or outdoor applications. It is ideal for residential, office, mall, hospital, school, parking garage, correction and detention, and other medium-security installations subject to vandalism.

The **IS310 Series** is designed with a microporous membrane vent that equalizes the internal and external pressure differential of the enclosure. The vent offers enhanced ingress protection by repelling water and dust, yet it allows for the free passage of vapors to prevent condensation within the enclosure.

The **IS310 Series System** can be mounted directly to a wall or ceiling. The ICS310-AP adapter plate allows adaptation to a 2-gang electrical box, the ICS310-SS sun shroud helps shield the unit from sun in outdoor applications, and the ICS310-COND allows the unit to be used in applications requiring conduit.



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IP66



U.S. Patents D476,025; 6,715,939 B2; 6,805,498 B2

International Standards  
Organization Registered Firm;  
ISO 9001 Quality System



# TECHNICAL SPECIFICATIONS

## GENERAL

Construction	Aluminum base and cover, steel camera mounting bracket
Finish	Light gray polyester powder coat
Unit Weight	1.45 lb (0.66 kg)
Shipping Weight	2.0 lb (0.90 kg)

## ELECTRICAL

Input Voltage*	12 VDC or 24 VAC ( $\pm 10\%$ ), autosensing
Synchronization	Internal or AC line lock
Power Consumption	
Camera	<3 W (DW/CW models) <4 W (DN/CH models)
Heaters	10 W when active; thermostatically controlled

\*24 VAC power is recommended when installing any Camclosure Integrated Camera System under fluorescent lighting conditions.

## MECHANICAL

Pan/Tilt/Adjustment	
Manual	180° pan; 180° tilt

## VIDEO

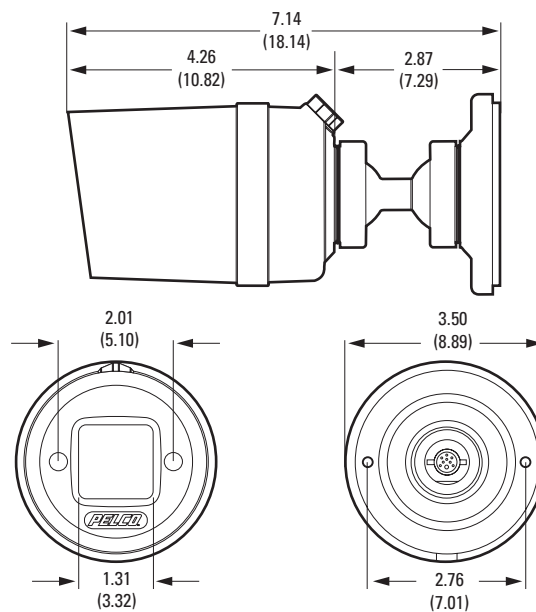
Signal System	NTSC or PAL
Video Output	
Composite	1 Vp-p, 75 ohms
UTP	1 Vp-p, 100 ohms
Video Connectors	1 composite BNC and 1 UTP
Service Connector	3-conductor, 2.5 mm connector for video output to optional IS-SC cable

## ENVIRONMENTAL

Environment	Low temperature, indoor/outdoor
Operating Temperature	-50° to 122°F (-46° to 50°C); de-ices to 25°F (-4°C)
Thermostat Operation	Heater is thermostatically controlled to activate ON at 50°F (10°C) and OFF at 80°F (27°C)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- FCC, Class B
- UL/cUL Listed
- C-Tick
- GOST
- Meets NEMA Type 4X and IP66 standards
- ISTA Shipping Standard
- U.S. Patents D475,025; 6,715,939 B2; 6,805,498 B2



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

# TECHNICAL SPECIFICATIONS

## CAMERA SPECIFICATIONS

	<b>Day/Night Wide Dynamic Range Varifocal, Auto Iris (DW Series)</b>	<b>Day/Night High Resolution Varifocal, Auto Iris (DN Series)</b>	<b>Wide Dynamic Range Varifocal, Auto Iris (CW Series)</b>	<b>High Resolution Varifocal, Auto Iris (CH Series)</b>
Imaging Device	1/3-inch pixel based imager	1/3-inch interline color CCD	1/3-inch pixel based imager	1/3-inch interline color CCD
Picture Elements	720 (H) x 540 (V)	NTSC: 768 (H) x 494 (V) PAL: 752 (H) x 582 (V)	720 (H) x 540 (V)	NTSC: 768 (H) x 494 (V) PAL: 752 (H) x 582 (V)
Dynamic Range (DW/CW only)	102 dB typical 120 dB maximum	—	102 dB typical 120 dB maximum	—
Scanning System	2:1 interlace/ progressive (DIP switch)	2:1 interlace	2:1 interlace/ progressive (DIP switch)	2:1 interlace
Horizontal Resolution	NTSC: 504 TV lines PAL: 504 TV lines	NTSC: 540 TV lines PAL: 540 TV lines	NTSC: 504 TV lines PAL: 504 TV lines	NTSC: 540 TV lines PAL: 540 TV lines
Signal-to-Noise Ratio	>53 dB	>50 dB	>53 dB	>50 dB
Minimum Illumination	Color (day): 0.8 lux SENS 8X: 0.2 lux  B-W (night): 0.08 lux SENS 8X: 0.02 lux  (f/1.0, 40 IRE, AGC on, 75% scene reflectance, 3.0-9.5 mm lens)	Color (day): 0.15 lux B-W (night): 0.015 lux  (f/1.0, 40 IRE, AGC on, 75% scene reflectance, 3.0-9.5 mm lens)	Color (day): 0.8 lux SENS 8X: 0.2 lux  (f/1.0, 40 IRE, AGC on, 75% scene reflectance, 3.0-9.5 mm lens)	0.3 lux  (f/1.0, 40 IRE, AGC on, 75% scene reflectance, 3.0-9.5 mm lens)
Day/Night Operation				
Day	Infrared (IR) cut filter	Infrared (IR) cut filter and optical low pass filter	—	—
Night	No filter	Optical low pass filter	—	—
Filter Switch Threshold	Dusk 4 lux Dark 1 lux	0.15 lux	—	—
Gain Control	Auto (36 dB maximum)	Auto/Manual (DIP switch)	Auto (36 dB maximum)	Auto/Manual (DIP switch)
Exposure	Auto (1/15-1/22,000)	Auto (1/60-1/100,000)	Auto (1/15-1/22,000)	Auto (1/60-1/100,000)
White Balance	Auto or manual (DIP switch), 2,800° to 7,500°K	Auto or manual (DIP switch), 2,500° to 9,500°K	Auto or manual (DIP switch), 2,800° to 7,500°K	Auto or manual (DIP switch), 2,500° to 9,500°K
Backlight Compensation	Auto	ON/OFF (DIP switch)	Auto	ON/OFF (DIP switch)

## LENS SPECIFICATIONS

Series	Varifocal with Auto Iris			
	DW/CW Series		DN/CH Series	
Focal Length	3.0-9.5 mm	9.0-22.0 mm	3.0-9.5 mm	9.0-22.0 mm
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
F-Number (f)	1.0-1.7	1.5-3.0	1.0-1.7	1.5-3.0
Operation				
Iris	Auto	Auto	Auto	Auto
Focus	Manual	Manual	Manual	Manual
Zoom	Manual	Manual	Manual	Manual
Angle of View*				
Horizontal	100.4° to 31.6°	32.4° to 13.6°	95.0° to 30.2°	30.6° to 13.0°
Diagonal	131.6° to 39.6°	41.4° to 17.2°	123.6° to 37.6°	39.2° to 16.4°
Vertical	72.8° to 23.8°	23.8° to 10.2°	69.0° to 22.6°	22.6° to 9.8°

\*Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.

# SYSTEM MODELS AND RELATED PRODUCTS

## SYSTEM MODEL NUMBERS

Camera Type	Lens Type	NTSC	PAL
Color Day/Night with WDR	3.0-9.5 mm with auto iris	IS310-DWV9	
	9.0-22.0 mm with auto iris	IS310-DWV22	
Color Day/Night	3.0-9.5 mm with auto iris	IS310-DNV9	IS310-DNV9X
	9.0-22.0 mm with auto iris	IS310-DNV22	IS310-DNV22X
Color WDR	3.0-9.5 mm with auto iris	IS310-CWV9	
	9.0-22.0 mm with auto iris	IS310-CWV22	
Color, High Resolution	3.0-9.5 mm with auto iris	IS310-CHV9	IS310-CHV9X
	9.0-22.0 mm with auto iris	IS310-CHV22	IS310-CHV22X

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
MCS*E Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## OPTIONAL ACCESSORIES

ICS310-AP	Adapter plate for a 2-gang electrical box
ICS310-COND	Conduit adapter; can be adapted to any vertical or horizontal mounting surface
ICS310-SS	Sun shroud for outdoor applications
IS-SC	4-foot service/monitor cable; compatible with any standard monitor BNC connector



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