IS50/IS51 Series Camclosure® 2 Camera System

RUGGED OUTDOOR MINI DOME, SURFACE AND FLUSH MOUNT

Product Features

- Vandal-Resistant Heavy Duty Outdoor Enclosure with Camera and Lens
- 3 Camera Options
  – Super Dynamic 5 (SD5)™ Day/Night Wide Dynamic Range (WDR)
  – Day/Night High Resolution
  – High Resolution Color
- Varifocal Lens
- Shipped Completely Assembled, Easy to Install
- 24 VAC or 12 VDC Operation, Autosensing
- Manual, 3-Axis (Pan/Tilt/Rotation) Positioning Allows Adjustment for Optimum Camera Rotation and Placement
- Service Connector for Video Output
- Available in Surface or Flush Mount Models with Smoked or Clear Domes
- Built-in Heater for Outdoor Environments

IS51-DWSV8S MODEL

- Dehumidifier to Prevent Condensation (DWS Series Only)
- Auto Image Stabilizer to Compensate for External Vibration (DWS Series Only)

The **IS50/IS51 Series Camclosure® 2 Camera System** integrates a camera and lens package into a small, versatile rugged enclosure that can be mounted directly to, or recessed into, a ceiling or wall. The **IS50/IS51 Series** features a three-axis camera and lens positioning system that is capable of a wide variety of pan and tilt angles.

The **IS50/IS51 Series** offers three high resolution camera options suitable for a variety of outdoor environments:

- **Super Dynamic 5 (SD5)™ day/night wide dynamic range (WDR):** Features a high resolution (650 TVL) color camera with auto iris, varifocal lens, and auto back focus. Application examples include environments with difficult lighting that require extremely high sensitivity and dynamic range.

- **True day/night:** Features a high resolution (540 TVL) color camera with auto iris and varifocal lens. Application examples include environments that require color images during the day but use monochrome images at night with or without supplemental IR lighting.

- **Color:** Features a high resolution (540 TVL) color camera with auto iris, simple day/night functions, and varifocal lens. For use in all general-purpose environments.

All cameras in the **IS50/IS51 Series** offer adaptive black stretch (ABS) to provide optimal image quality in dark areas by increasing the visibility in those areas without sacrificing the image quality in brighter areas. In addition, in some cameras the **IS50/IS51 Series** features Super Dynamic 5 (SD5) technology, ensuring the best picture quality even in challenging environments. The Super Dynamic 5 (SD5) day/night WDR camera is equipped with auto back focus (ABF) and intelligent motion detection (i-VMD). The ABF feature automatically adjusts the cameras CCD position when installing or changing from color to black-white mode, saving time during setup and optimizing focus. The i-VMD feature is an intelligent built-in video motion detector that provides more efficient and reliable surveillance, while eliminating the loss of notification in vital scenes. Using advanced motion analytics provides the ability to accurately detect motion within a targeted area. The i-VMD analytics include three behaviors: motion detection, object abandonment/removal, and scene change detection.

The **IS50/IS51 Series** is shipped completely assembled, making installation fast and easy. To surface-mount the unit, remove it from the box, attach it to the mounting surface, and connect video and power. For recessed installations, use the supplied mounting bracket to install the unit inside a ceiling or wall.

The **IS50/IS51 Series** also features a complete line of optional mounting accessories. The IS50-P pendant mount allows the IS50/IS51 surface mount cameras to be adapted for pendant installations. The IS50-P can also be combined with the SWM-SR compact wall mount for wall mount installations. In addition, the IS50-FK flush mount kit allows a surface mount unit to be installed in a ceiling if the installation type should change after the original deployment.

CAMERA/OPTICS

	IS50/IS51-DWS Series Super Dynamic (SD5) Day/Night Wide Dynamic Range Models	IS50/IS51-DN Series True Day/Night Models	IS50/IS51-CH Series Color Models with Simple Day/Night
Image Sensor	1/3-inch interline transfer CCD	1/3-inch interline transfer CCD	1/3-inch interline transfer CCD

Effective Pixels
  NTSC
  PAL
	976 (H) x 494 (V)
	976 (H) x 582 (V)
		768 (H) x 494 (V)
		752 (H) x 582 (V)
			768 (H) x 494 (V)
			752 (H) x 582 (V)

Scanning Area	0.19-inch (H) x 0.14-inch (V) (4.8 x 3.6 mm)	0.19-inch (H) x 0.15-inch (V) (4.9 x 3.7 mm)	0.19-inch (H) x 0.15-inch (V) (4.9 x 3.7 mm)
Scanning System	2:1 interlace	2:1 interlace	2:1 interlace

Scanning Lines
  NTSC
  PAL
	525 lines
	625 lines
		525 lines
		625 lines
			525 lines
			625 lines

Scanning Frequency
  NTSC
 	
  PAL
	Horizontal, 15.734 kHz
	Vertical, 59.94 Hz
	Horizontal, 15.625 kHz
	Vertical, 50.00 Hz
		Horizontal, 15.734 kHz
		Vertical, 59.94 Hz
		Horizontal, 15.625 kHz
		Vertical, 50.00 Hz
			Horizontal, 15.734 kHz
			Vertical, 59.94 Hz
			Horizontal, 15.625 kHz
			Vertical, 50.00 Hz

Synchronization	Internal LL (phase adjustable power supply synchronization)	Internal	Internal
Horizontal Resolution	650 TV lines, typical (color mode) 700 TV lines or more (B-W mode)	540 TV lines (color mode, at center) 570 TV lines (B-W mode)	540 TV lines (at center)
Minimum Illumination	0.1 lux (color mode) 0.003 lux (sensitivity up x32) 0.01 lux (B-W mode) 0.0003 lux (sensitivity up x32)	0.06 lux (color mode) 0.05 lux (B-W mode)	0.6 lux (color mode) 0.4 lux (B-W mode)
Dynamic Range	54 dB/128X	Adaptive Black Stretch	Adaptive Black Stretch
Day/Night Type	IR filter removal	IR filter removal	Simple
Video Output	1.0 Vp-p, NTSC/PAL composite, 75 ohms, BNC connector	1.0 Vp-p, NTSC/PAL composite, 75 ohms, BNC connector	1.0 Vp-p, NTSC/PAL composite, 75 ohms, BNC connector
White Balance	Auto Tracking White Balance/Automatic White Balance Control	Auto Tracking White Balance/Automatic White Balance Control	Auto Tracking White Balance/Automatic White Balance Control
Signal-to-Noise Ratio	50 dB (equivalent to AGC Off, weight On)	50 dB (equivalent to AGC Off, weight On)	50 dB (equivalent to AGC Off, weight On)
Lens	2X varifocal lens	3.6X varifocal lens	3.6X varifocal lens
Focal Length	3.8 ~ 8.0 mm	2.8 ~ 10.0 mm	2.8 ~ 10.0 mm
F-Number	f/1.4 (WIDE) to f/1.8 (TELE)	f/1.3 (WIDE) to f/3.1 (TELE)	f/1.3 (WIDE) to f/3.1 (TELE)
Focus Range	∞ to 3.9 ft (1.2 m)	∞ to 3.9 ft (1.2 m)	∞ to 3.9 ft (1.2 m)

Angle of View
  Horizontal
  Vertical
	73.6° wide zoom; 35.6° telephoto zoom
	53.4° wide zoom; 26.6° telephoto zoom
		100.2° wide zoom; 27.4° telephoto zoom
		73.3° wide zoom; 20.3° telephoto zoom
			100.2° wide zoom; 27.4° telephoto zoom
			73.3° wide zoom; 20.3° telephoto zoom

Adjusting Angle
  Panning Range
  Tilting Range
  Rotation Range
	±170°
	±75°
	±100°
		+180° to −140°
		±75°
		±100°
			+180° to −140°
			±75°
			±100°

Exposure (Shutter)
  NTSC
 	
  PAL
	SD5 Off: 1/60, 1/100, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, and 1/10,000
	SD5 On: 1/60 and 1/100
	
	SD5 Off: 1/50, 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, and 1/10,000
	SD5 On: 1/50 and 1/120
		Auto Light Control (ALC)
		
		Auto Light Control (ALC)
			Auto Light Control (ALC)
			
			Auto Light Control (ALC)

TECHNICAL SPECIFICATIONS

GENERAL

Construction
Enclosure	Aluminum die cast
Bubble	Polycarbonate resin
Finish	Light gray

Weight
Super Dynamic 5

(SD5) WDR Models	Unit	Shipping
Surface Mount	3.76 lb (1.71 kg)*	6 lb (2.70 kg)*
Flush Mount	4.53 lb (2.05 kg)†	11 lb (4.89 kg)†

Color and
Day/Night Models
Surface Mount	3.20 lb (1.45 kg)	6 lb (2.40 kg)
Flush Mount	3.97 lb (1.80 kg)	11 lb (4.59 kg)

Effective Projected Area (EPA) 9.09 square inches (without mount)

Multilingual
On-Screen Display   English, French, Spanish, German, Portuguese, Russian, Japanese

ELECTRICAL

Power Source‡
Super Dynamic 5

(SD5) WDR Models	NTSC	PAL
	24 VAC, 60 Hz	24 VAC, 50 Hz
	12 VDC§, 280 mA	12 VDC§, 280 mA

Color and Day/Night
Models	NTSC	PAL
	24 VAC, 60 Hz	24 VAC, 50 Hz
	12 VDC§, 220 mA	12 VDC§, 220 mA

Power Consumption
Super Dynamic 5

(SD5) WDR Models	NTSC	PAL
Without Heater	3.4 W	3.4 W
With Heater	14 W	14 W

Color and Day/Night
Models	NTSC	PAL
Without Heater	2.9 W	2.9 W
With Heater	13.1 W	13.1 W

ENVIRONMENTAL

Environment	Outdoor

Ambient Temperature
Without Heater	14° to 122°F (−10° to +50°C)
With Heater	−22° to 122°F (−30° to +50°C)
Ambient Humidity	Less than 90%
Impact Resistance	IEC 60068-2-75 Test Eh (50J)

CERTIFICATIONS/RATINGS/PATENTS

- CE, Class A
- FCC, Class A
- UL/cUL Listed
- C-Tick
- Meets IP66 standards, IEC60529
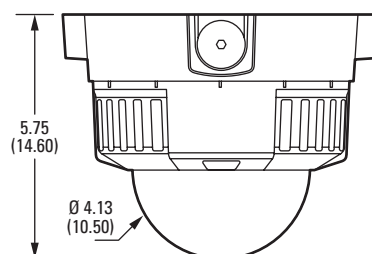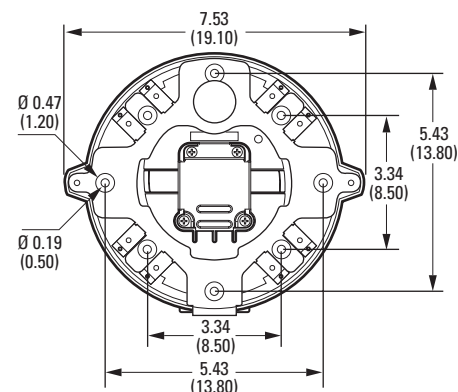
SURFACE MOUNT
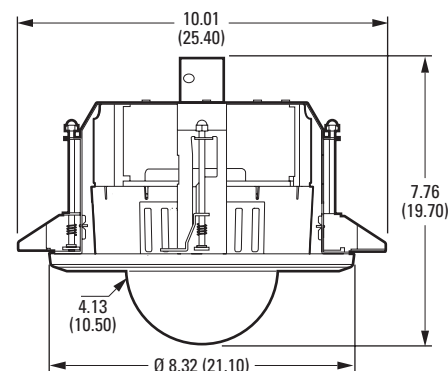
FLUSH MOUNT

*The total surface mount weight includes 0.22 lb (0.1 kg) for the camera attachment.

†The total flush mount weight includes 1.54 lb (0.7 kg) for ceiling mount bracket assembly.

‡Power source specifications include ±10% tolerance.

§When using 12 VDC power supply, the heater is not available.

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

MODELS

Camera Type	Mount Type	Bubble	NTSC	PAL
Super Dynamic 5 (SD5) Day/Night WDR (DWS Series)	Surface	Clear	IS51-DWSV8S	IS51-DWSV8SX
		Smoke	IS50-DWSV8S	IS50-DWSV8SX
	Flush	Clear	IS51-DWSV8F	IS51-DWSV8FX
		Smoke	IS50-DWSV8F	IS50-DWSV8FX
Day/Night (DN Series)	Surface	Clear	IS51-DNV10S	IS51-DNV10SX
		Smoke	IS50-DNV10S	IS50-DNV10SX
	Flush	Clear	IS51-DNV10F	IS51-DNV10FX
		Smoke	IS50-DNV10F	IS50-DNV10FX
Color (CH Series)	Surface	Clear	IS51-CHV10S	IS51-CHV10SX
		Smoke	IS50-CHV10S	IS50-CHV10SX
	Flush	Clear	IS51-CHV10F	IS51-CHV10FX
		Smoke	IS50-CHV10F	IS50-CHV10FX

RECOMMENDED MOUNTS

IS50-P	Pendant mount, outdoor; compatible with all models
IS50-CM	Corner mount, indoor or outdoor; compatible with all models
SWM-SR	Compact wall mount, light gray finish; can be used with IS50-P for wall-mount installations; can also be adapted for corner or pole applications
WMVE-SR	Wall mount, light gray; can be used with IS50-P for wall-mount installations that require increased vandal resistance or surface mount conduit
IS50-FK	Flush mount kit; compatible with surface mount models only
SWM-PA-GY	Pole adapter with stainless steel hardware; gray finish
SWM-CA	Corner adapter; gray finish
SWM-CA24	Same as SWM-CA except includes internal transformer to convert 120 or 230 VAC input to 24 VAC

RECOMMENDED POWER SUPPLIES

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

OPTIONAL ACCESSORIES

TW3001PC	Passive twisted wire transmission for use in unshielded twisted pair (UTP) installations
13VD15-50	15 to 50 mm lens; compatible with DWS models only