Spectra II® Series Discreet Dome Systems
PREMIER INTEGRATED DOME SYSTEM

CE

UL LISTED

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IP66
U.S. Patent
#5,931,432

Product Features

- Four Different High Resolution IOP Cameras to Choose From
- In-ceiling and Pendant Models Available
- Auto Focus with Manual Override
- Programmable Camera Settings
- High Resolution Camera with AC Line Lock
- 64 Presets
- Auto Iris with Manual Override
- 5.9-inch Acrylic Bubble
- Variable Scan Speed (0.1-250°/Second)
- "Auto Flip" Dome Rotation
- 360° Continuous Pan Rotation
- Integral Multi-protocol Receiver/Driver
- Quick Disconnect Dome Drive
- 7 Alarm Inputs; 2 Auxiliary Outputs (1 Programmable)
- Built-in Power Line Surge and Lightning Protection
- Easy to Install - Quick and Simple Electrical Connections
- Indoor/Outdoor Applications

IN-CEILING MODEL
SD5BC-F0

ENVIRONMENTAL PENDANT
MODEL SD5BC-PG-E0
(SHOWN WITH SWM-GY WALL MOUNT)

The **Spectra II®** Integrated Dome is the perfect surveillance system for demanding applications. The system is noted for its high acceleration rate and smooth, steady motion. Variable speed capabilities range from a smooth, fast pan motion of 250° per second to a smooth "creep" speed of .1° per second.

Spectra II Premier Integrated Dome System consists of a back box, dome drive, and lower dome, which may be ordered either as a complete system, or as separate components.

The dome drive features an Integrated Optics Package (IOP) camera and a mechanical/electrical quick, disconnect system, making installation quick and easy. Choose the perfect high-resolution IOP camera for your application. Choices include, two color cameras with LowLight™ color technology (one with 128X total zoom and one with 176X total zoom); a color/black & white camera with a remove-able infrared cut filter and 216X total zoom lens; and a monochrome camera with 128X total zoom lens. All IOP cameras include a 1/4 CCD imager and auto focus lens.

The **Spectra II** is capable of 360° rotation and has an "Auto Flip" feature. Auto flip allows the dome to rotate 180° and reposition itself for continuous viewing of any subject that passes directly beneath the dome. Other features of the **Spectra II** Integrated Dome System include:

- Proportional Zoom - Pan and tilt speed continually decreases in proportion to the depth of zoom.

- Auxiliary Outputs - Used to control optional relays/devices.
- Alarm Inputs - Programmable for either high or low priority with many programmable actions upon alarm.
- Zone Blanking - Allows up to eight zones (programmable in size) to be set to output blank video.
- Patterns - Capacity to do one full pattern or two half patterns, consisting of any standard pan, tilt and lens command.
- Power-up Recovery Mode - Allows the user to specify what condition the dome will resume when the power is cycled.

Spectra II Premier Integrated Dome System is available as either an in-ceiling or pendant mount model. The in-ceiling system may be installed in either suspended or hard ceilings. The pendant model mounts directly to any recommended mount, flush to a ceiling, or to 1.5-inch NPT female threaded pipe. All outdoor pendant models are environmentally sealed to a rating of NEMA 4X and IP66 and include a sun shield, heater and fan.

The **Spectra II** Premier Integrated Dome System is available with an optional translator card that allows the dome to accept control commands from competitive control systems. These protocols add to the capability of the dome, which is also compatible with Pelco Coaxitron®, P protocol, and D protocol controls, including matrix switchers.
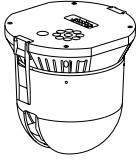
ISO 9001 CERTIFIED

International Standards Organization Registered Firm ISO 9001 Quality System

TECHNICAL SPECIFICATIONS
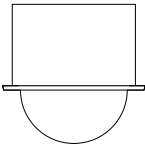
COMPONENT FEATURES
Dome Drive

- 64 Presets with 20-Character Labels Each
- 0.5° Preset Accuracy
- Rotating ABS Liner with Sealed Fixed Bubble
- Eight Zones (programmable in size) Can Be Labeled With up to 20 Characters Each or Set to Output Blank Video (when used with appropriate control)
- Seven Alarm Inputs
- One Auxiliary (Form C) Relay Output and One Open Collector Auxiliary Output (can be alternately programmed to operate upon alarm)
- Action on Alarm – Alarms can be individually programmed for high or low priority, to initiate a stored pattern, or go to an associated preset when received
- Resume After Alarm – Allows the dome to return to a previous programmed state after alarm acknowledgement
- Single Pattern May Be Programmed in One of Three Modes (1.5, 3, or 6 minutes) or May Be Split into Two Patterns of Half Duration.
- Proportional Pan & Tilt – Continually decreases pan and tilt speeds in proportion to depth of zoom
- Variable Scan Speed – Scan speed can be programmable between 1-40 degrees per second
- Pan Motion Profile Allows 80 Degree/Second Pan Speed (when not in Turbo mode)
- Programmable Limit Stops for Auto/Random/Frame Scan Modes*
- Coaxitron®, RS-422 "P" Series and "D" Series Protocols; Accepts competitive control protocol with optional translator card
- Built-in Menu System for Setup of Camera Functions
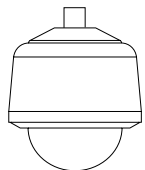- "Auto Flip" Rotates Dome 180° at Bottom of Tilt Travel

* Not available in CM7500 Matrix, MPT9000 or KBD9000 controls.

Back Box, In-Ceiling

- Single Back Box for Suspended or Hard Ceiling Applications
- Very Easy In-Ceiling Installation Requiring Only 5.25-inch Space Above Ceiling and 3.25-inches Below
- Minimum Ceiling Thickness .5-inch; Maximum 1.75-inches
- Quick Disconnect to Dome Drive
- Suitable for use in Environmental Air Handling Spaces
- Ratings: NEMA 1, IP40

Back Box, Pendant

- Available in Black or Gray Finish
- Pendant 9.50-inch Overall Length x 8.52-inch Diameter (including dome)
- Quick Disconnect to Dome Drive
- Ratings: NEMA 4X, IP66

GENERAL

Construction

Back Box	Aluminum
Dome Drive	Aluminum, ABS plastic
Lower Dome	Acrylic
Light Attenuation	Smoked (1/2 f-stop light loss)
	Clear (Zero light loss)
	Chrome (2 f-stop light loss)
	Gold (2 f-stop light loss)

Cable Entry (Back Box)

In-ceiling	.75-inch conduit fitting
Pendant	Through 1.5-inch NPT pendant mount
Dimensions	See dimension drawing

Weight (approximate)

	Unit	Shipping
Back Box		
In-ceiling	1.5 lb (.68 kg)	2 lb (.9 kg)
Pendant Indoor	3 lb (1.36 kg)	4 lb (1.81 kg)
Outdoor Pendant	4.25 lb (1.93 kg)	6 lb (2.72 kg)
Dome Drive	2.65 lb (1.20 kg)	5 lb (2.27 kg)
Lower Dome		
In-ceiling	.19 lb (.09 kg)	1 lb (.45 kg)
Pendant	1.3 lb (.59 kg)	2.2 lb (1.0 kg)

Environment

In-ceiling	Indoor only
Pendant	Indoor/Outdoor

Operating Temperature

In-ceiling	32° to 122°F (0° to 50°C)
Pendant	
Indoor:	32° to 140°F (0° to 60°C) absolute maximum operating temperature; 32° to 122°F (0° to 50°C) sustained maximum operating temperature (Assumes no wind chill factor; for detailed test conditions, contact Pelco.)
Environmental:	
Maximum	140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum
Minimum	-60°F (-51.11°C) absolute minimum; Minimal icing at sustained minimum of -50°F (-45.56°C) ; Prevents icing at sustained minimum of -40°F (-40°C); de-ices .1 inch (2.5 mm) within 3 hours after power-up.

Effective Projected Area (EPA◆)	~175 square inches

MECHANICAL (DOME DRIVE ONLY)

Pan Movement	360° Continuous pan rotation
Vertical Tilt	Unobstructed +2° to -92°
Manual Pan/Tilt Speeds**	
Pan	0.1°–80°/sec manual operation, 150°/sec Turbo
Tilt	0.1°–40°/sec manual operation
Preset Speeds:	
Pan	250°/sec
Tilt	200°/sec

** For variable-speed operation an appropriate controller is required. (With non-variable speed control, Spectra II® pan/tilt speed is 24°/second.)

ELECTRICAL (DOME DRIVE ONLY)

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	30 vA nominal (indoor, w/o heater); 75 vA nominal (outdoor, with heater)
Fuse	1.6A
Auxiliary Outputs	2
Alarm Inputs	7

Cable Distances (24 VAC only)

	Wire Gauge					
	20	18	16	14	12	10
Indoor (30 vA)	94 ft (28m)	150 ft (45m)	238 ft (72m)	380 ft (115m)	603 ft (183m)	960 ft (292m)
Outdoor (75 vA)	37 ft (11m)	60 ft (18m)	95 ft (29m)	152 ft (46m)	241 ft (73m)	384 ft (117m)

◆Projects curved surfaces as flat to presume worst case conditions when calculating stress from external forces.

Reaction forces, attributable to environmental conditions, are minimal. Cyclic fatigue and stress corrosion, relative to the fastening of the dome/mount combination, must be closely monitored. Severity of environmental conditions dictates how often the fastening system should be checked. Thorough, scheduled maintenance procedures to monitor structural corrosion/fatigue is a requirement in any outdoor installation.

CAMERA/OPTICS

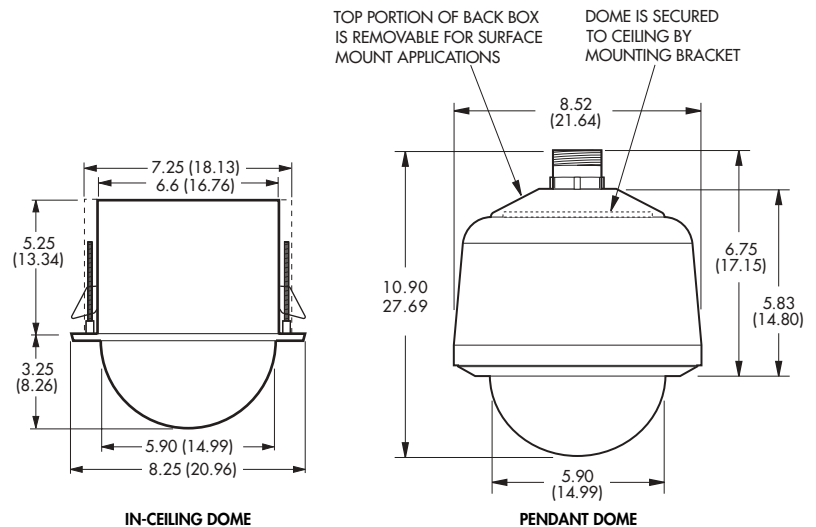|	Color (16X)	Monochrome (16X)	Color (22X)	Color/Black &White (18X)
Signal Format	NTSC **(DD5BC)** PAL **(DD5BC-X)**	EIA **(DD5AM)** CCIR **(DD5AM-X)**	NTSC **(DD5BC22)** PAL **(DD5BC22-X)**	NTSC **(DD5BCBW)** PAL **(DD5BCBW-X)**
Scanning System	2:1 interlace	2:1 interlace	2:1 interlace	2:1 interlace
Image Sensor Effective pixels NTSC PAL	1/4-inch interline transfer CCD 768 (H) x 494 (V) 752 (H) x 582 (V)	1/4-inch interline transfer CCD 768 (H) x 494 (V) 752 (H) x 582 (V)	1/4-inch interline transfer CCD 768 (H) x 494 (V) 752 (H) x 582 (V)	1/4-inch interline transfer CCD 768 (H) x 494 (V) 752 (H) x 582 (V)
Horizontal Resolution NTSC PAL	>470 TV lines >460 TV lines	>500 TV lines >500 TV lines	>470 TV lines >460 TV lines	>470 TV lines >460 TV lines
Lens	f1.4 (f = 4-64 mm optical, 16X optical zoom, 8X electronic zoom)	f1.4 (f = 4-64 mm optical, 16X optical zoom, 8X electronic zoom)	f1.6 (f = 4-88 mm optical, 22X optical zoom, 8X electronic zoom)	f1.4 (f = 4.1-73.8 mm optical, 18X optical zoom, 12X electronic zoom)
Horizontal Angle of View Focus	43° at 4 mm wide zoom; 3° at 64 mm telephoto zoom Automatic with manual override	43° at 4 mm wide zoom; 3° at 64 mm telephoto zoom Automatic with manual override	43° at 4 mm wide zoom; 2° at 88 mm telephoto zoom Automatic with manual override	42° at 4.1 mm wide zoom; 2.5° at 73.8 mm telephoto zoom Automatic with manual override
Maximum Sensitivity	.05 lux at 1/2-second shutter speed	.1 lux at 1/60-second shutter speed	.07 lux at 1/2-second shutter speed	.2 lux at 1/4-second shutter **(color)** .2 lux at 1/60-second shutter speed **(B&W)** .013 lux at 1/4-second shutter speed **(B&W)**
Sync System	AC line lock, phase adjustable via remote control*	AC line lock, phase adjustable via remote control *	AC line lock, phase adjustable via remote control*	AC line lock, phase adjustable via remote control*
White Balance	Automatic with manual override*	Automatic with manual override*	Automatic with manual override*	Automatic with manual override*
Shutter Speed Iris Control	Automatic (electronic iris)/manual 1/2 - 1/30,000* (NTSC) 1/2 - 1/30,000* (PAL) Automatic with manual override*	Automatic (electronic iris)/manual 1/60 - 1/30,000* (EIA) 1/50 - 1/30,000* (CCIR) Automatic with manual override*	Automatic (electronic iris)/manual 1/2 - 1/30,000* (NTSC) 1/2 - 1/30,000* (PAL) Automatic with manual override*	Automatic (electronic iris)/manual 1/4 - 1/10,000* (NTSC) 1/3 - 1/10,000* (PAL) Automatic with manual override*
Gain Control	Automatic with manual override*	Automatic with manual override*	Automatic with manual override*	Automatic with manual override*
Video Output NTSC/EIA PAL/CCIR	.714V ± .07V (100 IRE ±10 IRE) .7V ± .07V	.714V ± .07V (100 IRE ±10 IRE) .7V ± .07V	.714V ± .07V (100 IRE ±10 IRE) .7V ± .07V	714V ± .07V (100 IRE ±10 IRE) 7V ± .07V
Signal to Noise Ratio	>46 dB	>46 dB	50 dB	50 dB

* Manual control of camera setup functions can be done with CM6700, CM6800, CM8500, CM9500, CM9740, CM9760 and MPT9500 controllers, but not with CM7500, MPT9000 or KBD9000 controllers.

CERTIFICATIONS
◆ CE, Class A (DD5BC-X and DD5BC22-X).
◆ CE, Class B (BB5A-F, BB5A-PB, BB5A-PG, BB5A-PG-E, DD5AM-X and DD5BCBW-X)
◆ UL/cUL (BB5A-F, BB5A-PB, BB5A-PG, BB5A-PG-E, DD5AM, and DD5BC, DD5BC22 and DD5BCBW)
◆ FCC Class A (DD5BC and DD5BC22)
◆ FCC Class B (DD5AM and DD5BCBW)
◆ Suitable for use in environmental air handling spaces (BB5A-F)
Applicable directives/standards
 • NEMA Type 4X, IP66 (Pendant models)
 • NEMA Type 1, IP40 (In-ceiling models)

TOP PORTION OF BACK BOX IS REMOVABLE FOR SURFACE MOUNT APPLICATIONS

DOME IS SECURED TO CEILING BY MOUNTING BRACKET

7.25 (18.13)
6.6 (16.76)
5.25 (13.34)
3.25 (8.26)
5.90 (14.99)
8.25 (20.96)

8.52 (21.64)
10.90 27.69
6.75 (17.15)
5.83 (14.80)
5.90 (14.99)

IN-CEILING DOME

PENDANT DOME

Each Spectra II dome system consists of three components: Back Box (BB5), Dome Drive (DD5) and Lower Dome (LD5). You can select from the system models listed below or order individual components. If ordering individual components, make sure you order one each back box, dome drive and lower dome.

SYSTEM MODEL NUMBERS

Type	Back Box Color	Lower Dome	16X Color	22X Color	18X Color/B&W	16X Monochrome
In-Ceiling, Indoor	N/A	Smoked	SD5BC-F0	SD5BC22-F0	SD5BCBW-F0	SD5AM-F0
		Clear	SD5BC-F1	SD5BC22-F1	SD5BCBW-F1	SD5AM-F1
		Chrome	SD5BC-F2	SD5BC22-F2	SD5BCBW-F2	SD5AM-F2
		Gold	SD5BC-F3	SD5BC22-F3	SD5BCBW-F3	SD5AM-F3
Pendant, Indoor	Black	Smoked	SD5BC-PB-0	SD5BC22-PB-0	SD5BCBW-PB-0	SD5AM-PB-0
		Clear	SD5BC-PB-1	SD5BC22-PB-1	SD5BCBW-PB-1	SD5AM-PB-1
		Chrome	SD5BC-PB-2	SD5BC22-PB-2	SD5BCBW-PB-2	SD5AM-PB-2
		Gold	SD5BC-PB-3	SD5BC22-PB-3	SD5BCBW-PB-3	SD5AM-PB-3
	Lt. Gray	Smoked	SD5BC-PG-0	SD5BC22-PG-0	SD5BCBW-PG-0	SD5AM-PG-0
		Clear	SD5BC-PG-1	SD5BC22-PG-1	SD5BCBW-PG-1	SD5AM-PG-1
		Chrome	SD5BC-PG-2	SD5BC22-PG-2	SD5BCBW-PG-2	SD5AM-PG-2
		Gold	SD5BC-PG-3	SD5BC22-PG-3	SD5BCBW-PG-3	SD5AM-PG-3
Pendant, Environmental**	Lt. Gray	Smoked	SD5BC-PG-E0	SD5BC22-PG-E0	SD5BCBW-PG-E0	SD5AM-PG-E0
		Clear	SD5BC-PG-E1	SD5BC22-PG-E1	SD5BCBW-PG-E1	SD5AM-PG-E1

* For PAL and CCIR models add "-X" suffix to part number. (Example: SD5BC-PG-E0-**X**)
** Environmental dome systems include heater and sun shield.

COMPONENT MODEL NUMBERS

Back Box		Dome Drive		Lower Dome	
BB5A-F	In-ceiling	DD5BC	Color (NTSC) camera (128X)	LD5F-0	Smoked, in-ceiling
BB5A-PB	Pendant mount, black, indoor	DD5BC-X	Color (PAL) camera (128X)	LD5F-1	Clear, in-ceiling
BB5A-PG	Pendant mount, gray, indoor	DD5BC22	Color (NTSC) camera (176X)	LD5F-2	Chrome, in-ceiling
BB5A-PG-E	Same as BB5A-PG except supplied with heater and sun shield, environmental	DD5BC22-X	Color (PAL) camera (176X)	LD5F-3	Gold, in-ceiling
		DD5BCBW	Color/B&W (NTSC/EIA) camera (72X)	LD5PB-0	Smoked, pendant, black
		DD5BCBW-X	Color/B&W (PAL/CCIR) camera (72X)	LD5PB-1	Clear, pendant, black
		DD5AM	Monochrome (EIA) camera (128X)	LD5PB-2	Chrome, pendant, black
		DD5AM-X	Monochrome (CCIR) camera (128X)	LD5PB-3	Gold, pendant, black
		DD5-FM	Removable fixed mount bracket only (no camera package)	LD5PG-0	Smoked, pendant, gray
				LD5PG-1	Clear, pendant, gray
				LD5PG-2	Chrome, pendant, gray
				LD5PG-3	Gold, pendant, gray
				LD5PG-E0	Same as LD5PG-0 except with heater
				LD5PG-E1	Same as LD5PG-1 except with heater

Notes:
To order a fixed mount dome system refer to the component models above and select one each of the following: back box (BB5A-F), dome drive (DD5-FM), plus choice of lower dome (LD5F-0, LD5F-1, LD5F-2 or LD5F-3).

For environmental applications, you must order the environmental back box (BB5A-PG-E) and lower dome (LD5PG-E0 or LD5PG-E1). (Heater kit is not sold separately and cannot be retrofitted.)

OPTIONAL ACCESSORIES

BB5-PCA-BK	Pendant conduit adapter, black
BB5-PCA-GY	Pendant conduit adapter, gray
SCA1	Support rails for BB5A-F; for use in ceiling tile applications.
TXB-AB	Discontinued. Use TXB-AD or TXB-B translator board.
TXB-AD	Translator board for AD Manchester protocols.
TXB-B	Translator board for Philips (Burle) Allegiant Bi-phase protocols.
TXB-V	Translator board for Vicon® protocols.

RECOMMENDED POWER SUPPLIES

MCS Series	24 VAC Indoor transformer (See C653 spec and C655 spec)
WCS Series	24 VAC Weatherproof transformer (See C654 spec)

RECOMMENDED MOUNTS

In-Ceiling Domes

SD5-P	2' x 2' drop ceiling panel, aluminum construction. Replaces 2' x 2' ceiling tile

Pendant Domes

IWM Series	Wall mount, with or without integral 24 VAC, 100 vA transformer. Black or gray finish. Can be adapted for corner, parapet or pole applications. (See C203 spec)
MRCA	Ceiling mount, black (See C234 spec)
MRWA	Wall mount, black (See C234 spec)
PP4348	Parapet roof mount (See C204 spec)
PP350/PP351	Parapet wall/roof mount (See C212 spec)
SWM Series	Compact wall mount, black or gray finish. Can be adapted for corner or pole applications. (See C293 spec)

☐ Indicates change or addition since last revision.

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