



## PRODUCT SPECIFICATION

# ES3012 Series Integrated Positioning System ESPRIT™ PREMIUM PERFORMANCE P/T, COAXITRON® COMPATIBLE

CE



IP66

U.S. Patents  
#340,940  
#5,224,675

### Product Features

- Integrated Receiver, Pan & Tilt, and Housing with No Exposed Cabling
- Optional ImagePak® Integrated Optics Package
- Quick and Simple Electrical Connections
- Easy to Install
- Variable Speed – Advanced Motor Control Technology
- 360 Degree Continuous Pan Rotation
- Zone Blanking – Allows up to eight zones (programmable in size) to be set to output blank video.
- Operational in 90 mph Wind Conditions; Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100 Degrees Per Second in 50 mph Winds and 50 Degrees Per Second in 90 mph Winds
- Tilt Range of +40 Degrees to -90 Degrees from Horizontal
- Preset Positioning
- Designed for Minimal Maintenance, No Gears to Adjust
- Lightweight Aluminum Construction
- Indoor/Outdoor Applications
- NEMA 4X, IP66 Rated
- FCC Class B, CE Class B

Pelco's **Esprit™ ES3012 Series** Integrated Positioning System ingeniously integrates a pan and tilt, enclosure, and receiver into one compact system that is easy to install. On-screen, user-friendly menus also make the system easy to program and operate.

The **ES3012 Series** is available as a standard or ImagePak® system. The **Esprit ImagePak** system combines the innovative design of the standard system with a factory installed camera and lens package of your choice. Choose from a variety of standard or high-resolution, color or monochrome camera and lens combinations. The standard system does not include the camera and lens components. It is designed to accept any 24 VAC camera and lens combination up to 3.45" W x 3.17" H x 12.10" L (8.76 x 8.05 x 30.73 cm).

Every **ES3012** system (standard or ImagePak) has a built-in heater, window defroster/defogger, sun shroud, and insulation blanket. The system is available with an input voltage of 24 VAC or with a selectable power source of 120/230 VAC.

A powder-coated, aluminum construction makes the **ES3012** ideal for either indoor or outdoor applications. The system has an absolute operating temperature range of -40° to 140°F (-40° to 60°C).



ES3012-2W SYSTEM  
WITH WALL MOUNT

Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).

The **Esprit ES3012 Series** variable pan and tilt speeds range from 0.5 degrees to 40 degrees per second in manual pan mode and 0.5 degrees to 20 degrees per second in manual tilt. Pan preset and turbo speeds are 100 degrees per second in wind speeds of 50 mph and 50 degrees per second in the 90 mph wind-speed profile. Tilt preset speed is 30 degrees per second. The **ES3012** is capable of 360 degrees of continuous pan rotation. The tilt range allows for horizontal viewing of +40 to -90 degrees. There are 64 preset positions with a preset accuracy of one-quarter degree programmable through system software.

The **ES3012** features on-screen programmable menus for pan and scan speed, limit stops, zone blanking, and patterns. The unit also has a power-up recovery mode that allows the user to specify what condition the system will resume whenever the power is cycled.

International Standards Organization Registered Firm ISO 9001 Quality System



# TECHNICAL SPECIFICATIONS

## ELECTRICAL

Input Voltage	24, 120, or 230 VAC, 50/60 Hz; switch selectable for 120/230 VAC inputs	
Power Consumption	Maximum 50 vA per system	
Camera and Lens Voltage	24 VAC	
Heater and Defroster	Thermostatically controlled	
Electrical Connections	Two power source connections made at mount location with wire nut splices and one ground terminal; one BNC receptacle and four terminals on interconnect PCB at mount location	
Video Coaxial Cable		
Max. Wiring Distances	<u>Cable Type*</u>	<u>Maximum Distance</u>
	RG59/U	750 feet (229 m)
	RG6/U	1,000 feet (305 m)
	RG11/U	1,500 feet (457 m)

\* Minimum cable requirements:  
75 ohms impedance; all-copper center conductor;  
all copper braided shield with 95% braid coverage

## MECHANICAL

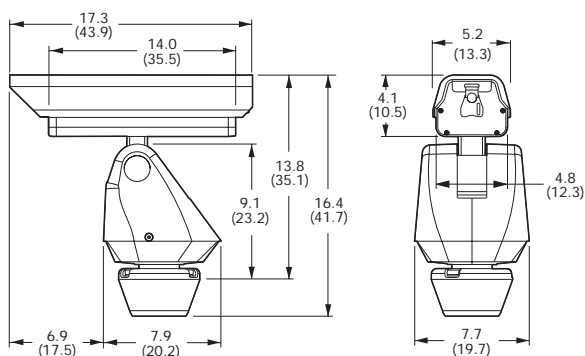
Pan Movement	360° Continuous pan rotation
Vertical Tilt	Unobstructed +40° to -90°
Variable Pan/Tilt Speed	
Pan	0.5° to 40°/sec variable-speed operation, 100°/sec Turbo
Tilt	0.5° to 20°/sec variable-speed operation
Preset Speeds	
Pan	100°/sec
Tilt	30°/sec
Camera Mounting	Elongated holes on removable camera mount; supplied with an adapter bracket to accommodate various heights of cameras
Maximum Camera and Lens Size	Accepts camera and lens combinations (including BNC connector) up to: 3.45" W x 3.17" H x 12.10" L (8.76 x 8.05 x 30.73 cm)
Latches	One link-lock, No. 3 stainless-steel latch; can be secured with padlock (not supplied)

## GENERAL

Construction	Die-cast, extruded and sheet aluminum; stainless steel hardware	
Finish	Gray polyester powder coat	
Viewing Window	0.18" (4.76 mm) thick, optically clear impact-resistant MR5 coated Lexan (U.L. 94HB rated)	
Window Viewing Area	2.25-inch (5.71 cm) diameter	
Operating Temperature	-40° to 122°F (-40° to 50°C) for sustained system operation or 140°F (60°C) absolute maximum. Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).	
Operating Environment	Will remain operational in 90 mph wind conditions; withstands 130 mph	
Dimensions	See dimension drawing	
Weight	<u>Unit</u>	<u>Shipping</u>
	ES3012-2, ES3012-5	20 lb (9.1 kg)    27 lb (12.3 kg)
	ES3012-2 or ES3012-5 with ImagePak option	25.7 lb (11.7 kg)    33 lb (14.8 kg)

## CERTIFICATIONS/RATINGS

- ◆ CE, Class B
- ◆ UL listed to Standard 2044
- ◆ cUL listed to CSA Standard 22.2 No. 1-94
- ◆ FCC, Class B
- ◆ NEMA 4X
- ◆ IP66



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

ES3012 SERIES DIMENSION DRAWING

## TECHNICAL SPECIFICATIONS

### CAMERA SPECIFICATIONS (IMAGEPAK® ESPRIT SYSTEMS ONLY)

	Standard Resolution, Color		High Resolution, Color	
	NTSC (Model CG)	PAL (Model CJ)	NTSC (Model CH)	PAL (Model CK)
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD
Picture Elements	510 (H) x 492 (V)	500 (H) x 482 (V)	768 (H) x 494 (V)	752 (H) x 582 (V)
Scanning System	525 lines; 2:1 interlace	525 lines; 2:1 interlace	525 lines; 2:1 interlace	525 lines; 2:1 interlace
Sync System	AC line lock/internal	AC line lock/internal	AC line lock/internal	AC line lock/internal
Horizontal Resolution	330 TVL	330 TVL	480 TVL	480 TVL
Minimum Illumination	0.4 lux at 30 IRE, f1.2	0.5 lux at f1.2 (AGC On)	0.9 lux at 30 IRE, f1.2	1.0 lux at f1.2 (AGC On)
CCD Iris	1/60 to 1/100,000 sec	1/50 to 1/10,000 sec	1/60 to 1/100,000 sec	1/50 to 1/10,000 sec
CCD Iris Control	On/Off selectable	On/Off selectable	On/Off selectable	On/Off selectable
Signal-to-Noise Ratio	52 dB (AGC Off)	>48 dB weighted (p-p signal/RMS noise)	52 dB (AGC off)	>48 dB weighted (p-p signal/RMS noise)
Automatic Gain Control	On/Off selectable	On/Off selectable	On/Off selectable	On/Off selectable
Phase Control	V-phase control ( $\pm 120^\circ$ )	V-phase control ( $\pm 90^\circ$ )	V-phase control ( $\pm 120^\circ$ )	V-phase control ( $\pm 90^\circ$ )
Backlight Compensation	On/Off selectable	On/Off selectable	On/Off selectable	On/Off selectable
Video Out	1 Vp-p, 75 ohms, sync negative, BNC type	1 Vp-p, 75 ohms, sync negative, BNC type	1 Vp-p, 75 ohms, sync negative, BNC type	1 Vp-p, 75 ohms, sync negative, BNC type
Power Requirements	11-40 VDC/14-30 VAC 50/60 Hz, auto selecting	11-40 VDC/14-30 VAC, 50/60 Hz, auto selecting	1-40 VDC/14-30 VAC, 50/60 Hz, auto selecting	11-40 VDC/14-30 VAC, 50/60 Hz, auto selecting
Power Consumption	<4W	<5W	<5W	<5W

	Standard Resolution, Monochrome		High Resolution, Monochrome	
	EIA (Model MG)	CCIR (Model MJ)	EIA (Model MH)	CCIR (Model MK)
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch Ex-View CCD	1/3-inch CCD
Picture Elements	510 (H) x 492 (V)	500 (H) x 582 (V)	768 (H) x 494 (V)	752 (H) x 582 (V)
Scanning System	525 lines; 2:1 interlace	625 lines; 2:1 interlace	525 lines; 2:1 interlace	625 lines; 2:1 interlace
Sync System	AC line lock/internal	AC line lock/internal	AC line lock/internal	AC line lock/internal
Horizontal Resolution	380 TVL	380 TVL	570 TVL	570 TVL
Minimum Illumination	0.4 lux at 30 IRE, f1.2	0.1 lux at f1.2 (AGC On)	0.21 lux at 30 IRE, f1.2	0.1 lux at f1.2 (AGC On)
CCD Iris	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec
CCD Iris Control	On/Off selectable	On/Off selectable	On/Off selectable	On/Off selectable
Signal-to-Noise Ratio	52 dB (AGC Off)	>50 dB	52 dB (AGC Off)	>50 dB
Automatic Gain Control	On/off selectable	Built-in, 28 dB	On/off selectable	Built-in, 28dB
Phase Control	V-phase control ( $\pm 120^\circ$ )	V-phase control ( $\pm 120^\circ$ )	V-phase control ( $\pm 120^\circ$ )	V-phase control ( $\pm 120^\circ$ )
Backlight Compensation	On/Off selectable	On/Off selectable	On/Off selectable	On/Off selectable
Video Out	1 Vp-p, 75 ohms, sync negative, BNC type	1 Vp-p, 75 ohms, sync negative, BNC type	1 Vp-p, 75 ohms, sync negative, BNC type	1 Vp-p, 75 ohms, sync negative, BNC type
Power Requirements	11-40 VDC/14-30 VAC, 50/60 Hz, auto selecting	11-40 VDC/14-30 VAC, 50/60 Hz, auto selecting	11-40 VDC/14-30 VAC, 50/60 Hz, auto selecting	11-40 VDC/14-30 VAC, 50/60 Hz, auto selecting
Power Consumption	<4W	<4W	<4W	<4W

### LENS SPECIFICATIONS (IMAGEPAK® ESPRIT SYSTEMS ONLY)

	Z6/Z6P	Z10/Z10P	Z20/Z20P	Z30/Z30P
Type	Motorized Zoom	Motorized Zoom	Motorized Zoom	Motorized Zoom
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Focal Length	6-36mm	6-60mm	5.6-112mm	5.5-165mm
Zoom Ratio	6X	10X	20X	30X
Relative Aperture (F)	0.95-360	1.6-360	1.6-360	1.8-360
Operation				
Iris	Auto iris (direct drive)	Auto iris (direct drive)	Auto iris (direct drive)	Auto iris (direct drive)
Focus and Zoom	Motorized *	Motorized*	Motorized*	Motorized*
Angle of View				
Diagonal	9.7°-53.7°	5.8°-54.3°	3.2°-59.4°	2.1°-58.7°
Horizontal	7.8°-43.7°	4.7°-44.2°	2.6°-47.6°	1.7°-47.6°
Vertical	5.9°-33.0°	3.5°-33.5°	1.9°-35.7°	1.3°-33.9°
Min. Object Distance	1.0m	1.0m	1.5m	1.8m

\*Model numbers with "P" suffix are motorized with preset capability.



## MODEL NUMBERS

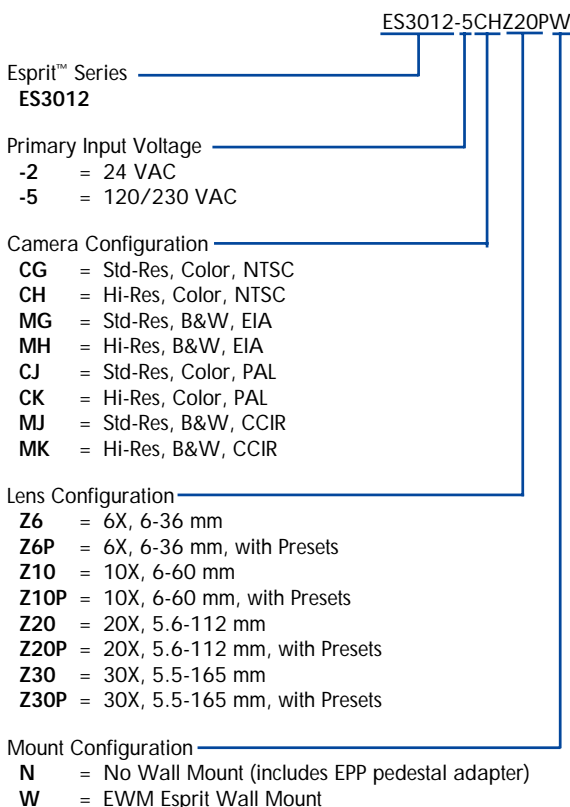
### MODELS

#### Basic

ES3012-2	Standard Esprit integrated positioning system (pan/tilt, enclosure and receiver), 24 VAC. No mount.
ES3012-5	Same as ES3012-2 except 120/230 VAC.
ES3012-2N	Standard Esprit integrated positioning system, 24 VAC, with pedestal adapter plate.
ES3012-5N	Same as ES3012-2N except 120/230 VAC.
ES3012-2W	Standard Esprit integrated positioning system, 24 VAC, with wall mount.
ES3012-5W	Same as ES3012-2W except 120/230 VAC.

#### ImagePak® Esprit Systems

Create a complete, ready-to-install system (including optics package) from the optional components below or refer to the Esprit ImagePak Selection Guide for model numbers.



### RECOMMENDED MOUNTS

ECM100	Esprit corner mount; for use with EWM wall mount only. (See C238 spec)
EPP	Esprit pedestal adapter. (See C238 spec)
EPM	Esprit pole adapter; for use with EWM wall mount only. (See C238 spec)

EWM Esprit wall mount with cable feedthrough. (For use with ES3012-2 or ES3012-5 models only.) (See C238 spec)

PM2000/  
PM2010 Pedestal mount with cable feedthrough. For use with Esprit systems with pedestal adapter plate. (See C255 spec)

### RELATED PRODUCTS

TXB-AB	Discontinued. Used 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 and C655 specs)
WCS Series	24 VAC Weatherproof transformer (See C654 spec)

### RECOMMENDED CONTROLS

CM6700	Microprocessor-based switcher/controller. (See C523 spec)
CM6800	Microprocessor-based, cross-point video switcher. (See C1515 spec)
CM9500	Microprocessor-based cross-point video switcher. (See C500 spec)
CM9740/CM9760	Microprocessor-based cross-point video switcher. (See C540 and C1508 specs)
MPT9000	Coaxitron control. (See C550 spec)
MX4000 Series	Genex® Series multiplexer. (See C1920, C1921, C1922, C1923, and C1995 specs)

### RECOMMENDED KEYBOARD CONTROLS

(For use in Direct Mode operation only)

KBD200*	Desktop keyboard, multi-speed PTZ control. (See C526 spec)
KBD300*	Desktop keyboard, vari-speed PTZ control. (See C527 spec)
KBD300V*	Same as KBD300 except has integrated video display. (See C527 spec)
MPT9500	Microprocessor-based transmitter/controller. (See C535 spec)

\*KBD keyboards require a remote keyboard wiring kit (KBDKIT) for direct mode operation; allows two-wire control of up to 16 daisy-chained receivers (or Esprit systems). Keyboards output Pelco P protocol at 4800 baud.

Indicates change or addition since last revision.

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