



United Vision Solutions



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United Vision Solutions, Co.

COMMERCIAL-IN-CONFIDENCE



HomeLand Security Products & Solutions

Eagle Vision EV3000-P-CCD



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Eagle Vision Long Range Camera System

USER MANUAL



EV3000-P-CCD 750B

- Please carefully follow the instructions in this manual in order to ensure long, trouble-free use of your camera system.

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GRAPHIC SYMBOL EXPLANATION

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.

1. Read Instructions - All the safety and operating instructions should be read before the video product is operated.
2. Retain Instructions - All the safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the video product and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - apply step A to the equipment that can be disconnected from the CCTV system without seriously jeopardizing security. Step b applies to equipment that must operate continuously such as video switching equipment at military installations.
 - a. Disconnect this video product from its power source before cleaning. Do not use caustic, abrasive, or aerosol cleaners. Use a damp cloth for cleaning.
 - b. Use a damp cloth to clean the equipment. Do not allow moisture or liquids to enter any vents. Do not use caustic, abrasive, or aerosol cleaners.
6. Attachments - Do not use attachments not recommended by United Vision Solutions as they may cause hazards.
7. Accessories - Do not place this video product on any unstable surface or table. The video product may fall, causing serious injury to a person and serious damage to the video product. Use only with a mounting accessory recommended by United Vision Solutions, or sold with the video product. Any mounting of the video product should follow

United Vision Solutions instructions and a mounting accessory recommended United Vision Solutions should be used.

8. Power Sources - This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your installation site, consult your United Vision Solutions dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.

9. Power-Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

10. Outdoor Cable Grounding - If an outside cable system is connected to the video product, be sure the cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

11. Lightning - For added protection for this video product when it is not used for long periods of time, disconnect it from its power source and from the cable system. This prevents damage to the video product due to lightning and power-line surges.

12. Power Lines - An outside cable system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside cable system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

13. Overloading - Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

14. Object and Liquid Entry - Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.

15. Servicing - Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

16. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by United Vision Solutions or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

17. Safety Check - Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

■ **Table of Contents** ■

1. Introduction
2. Specifications
3. Installation Notes
4. Communication, Video, and power connections
5. Camera ID address
6. Camera Control Unit
 - Zoom / Focus
 - Pan / Tilt
 - Preset Positions
7. Dimension Drawing
8. Warranty

1. Introduction

United Vision Solutions, LLC is a Massachusetts company, with its office at 10 Center St., Chicopee, Massachusetts, USA.

United Vision Solutions, LLC provides across the board expertise in all aspects of CCTV Long Range Camera System, from the design phase to the delivery of complete turnkey solutions.

United Vision Solutions, LLC designs CCTV Camera systems with an emphasis on Long Range capabilities using CCD, EMCCD technology and IR thermal Technology.

Our EV3000 Long Range Camera System features the latest technology in optical sensor, and Mecha-Electronic equipments. Deployed in diverse platforms such as Ports, Oil platforms, Airports and others locations throughout the world.

United Vision Solutions works closely with their partners to design advanced multi-sensor long range system using standard protocols to enable fast delivery, easy maintenance and end user friendly.

United Vision Solutions was the 1st company worldwide to integrate a 1000mm-2000m lens with EMCCD cameras in stainless Steel platform using fiber-optics for video and controls for ports monitoring project.

The EV3000-P-CCD 750B PTZ (Pan, Tilt & Zoom) Color Camera is an extremely robust, feature-rich, that will allow comprehensive viewing in most of all lighting conditions. The camera has been designed and qualified to meet harsh environments requirements. The camera uses a high resolution colour/mono sensor with 30x 10-300mm optical zoom. Other features include proportional pan and tilt speed control and up to 128 position presets, switchable zoom flip operation, Pan/tilt control speed, and smart auto-focus function. The camera is fully sealed and is contained within a robust powder coated aluminium housing.

2. Specification

CCD : 1/2" CCD, 470K pixel, Lux 0.08 Lux@F1.2 (Color), Built-in DIS
(Digital Image Stabilizer)

Lens : 10-300mm f1.5 30X Motorized Zoom, Video Auto Iris w/spot &
Preset, FOV 44° Wide to 1.55° Tele degree

Pan/Tilt

Rotating angle : - Pan 0°to 360°
- Tilt -90°to +20°±5°

Rotating Speed : - Pan 0.1°~ 80°/sec
- Tilt 0.1°~ 30°/s°

CCU : PRESET 128 Memories.

(Camera : Camera control(ZOOM,FOCUS)

Control : PAN/TILT/ZOOM/FOCUS PRESET

Unit) : Install Max. 255 address
: Communication interface : RS-485/RS-422(Default : RS485)

Electric power : AC110V~240V, 50/60Hz , Max 250w, FUSE : 250V/6A

Communication : Pelco-D, 2400 bps,N,8,1

Operating temperature : -25℃ to +60℃

Protection : IP66

Weight : About 28kg










Material : Aluminum casting ,PC

Color : Light Gray

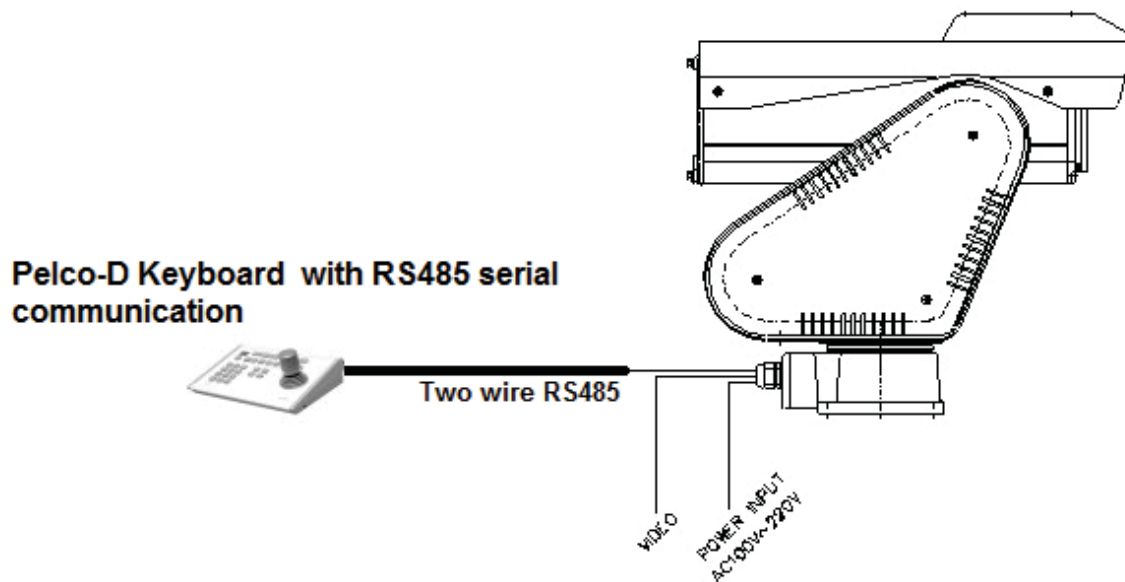
Size : 617L×532H×348W

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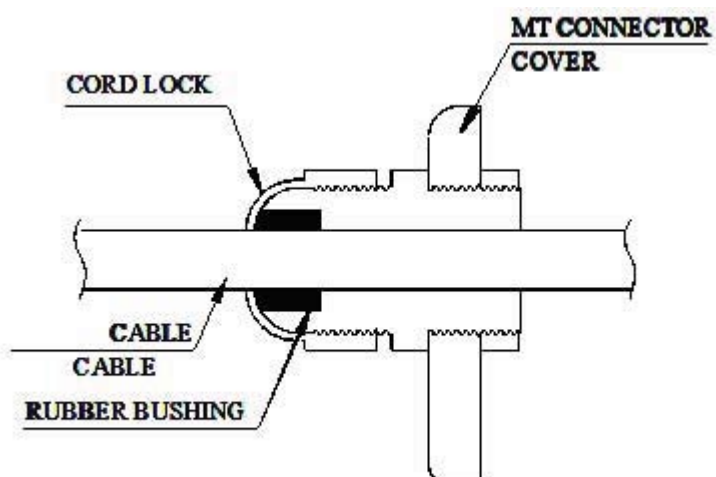
3. Installation Notes

	Before operation the unit, you must read this user' s Manual thoroughly and retain it for future reference.
	You must clean it with a wet cloth. Never use liquid cleanser.
	Never attach any other things to the unit as this could lead to danger.
	Be careful not to put this unit on an unstable stand, tripod, shelf, or Table
	Do not leave the unit in a location near heat sources or humidifier. This Unit needs ventilation
	Power supply AC100V~230V according to model desiring to confirm optimum power supply necessarily before establishment because is manufactured have better use 3 – WIRE GROUND TYPE.
	HOUSING CABLE of PAN/TILT must observe to become tight or is not been wrenched when rotate PAN/TILT.
	You must stop operation this unit and never connect the connector of the cable to the unit in case of the following. <ul style="list-style-type: none">● In case of the control cable being damaged.● When any liquid or unfavorable material fall into the unit.● When the unit doesn' t work properly according to the instruction.● When the unit fell down or the cabinet was damaged.
	You must make an expert examine the accessories whether they have the same specific character when you need replacement of them.

4. Communication, Video, and power connections



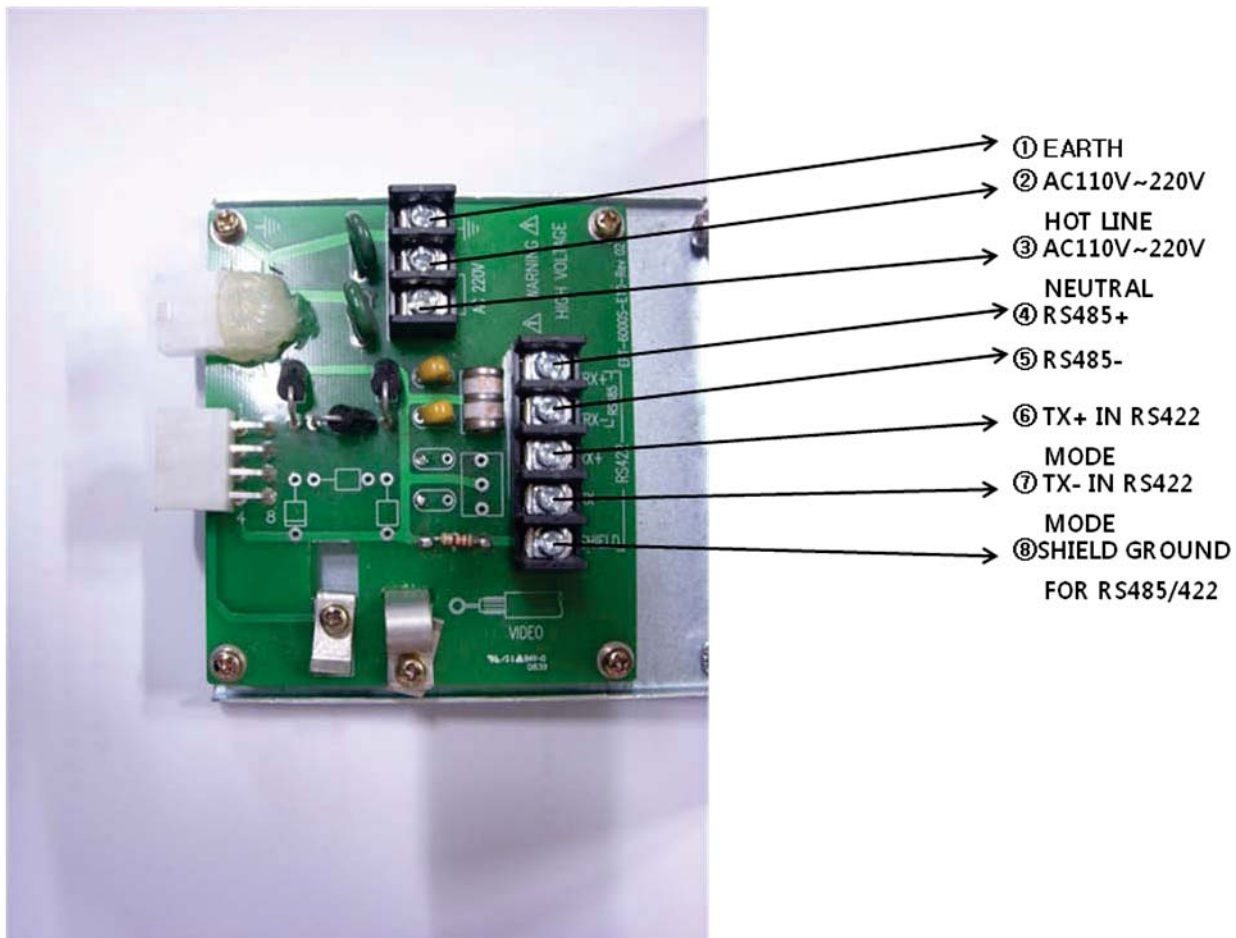
CABLE CONNECTION





CAUTION

- Be sure to mount a rubber-bushing when routing the control input and coaxial cables through the Cord Lock.
- If a gap is created between cable and Cord Lock, wrap the self-adhesive butyl rubber tape around the cable to prevent the entry of rainwater.
- Ensure the routed cable is correctly fixed by lightly pulling it.



COMMUNICATION, POWER, and VIDEO TERMINAL LEAD CABLE AND CIRCUIT

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5. Camera ID address

Turn Power off

- 5.1 Separate right side Side Cover and Address Cover that is attached in main frame.
- 5.2 Establish by Address that wish to use Address Switch of interior.
- 5.3 Attach Address Cover (necessarily waterproof confirmation)

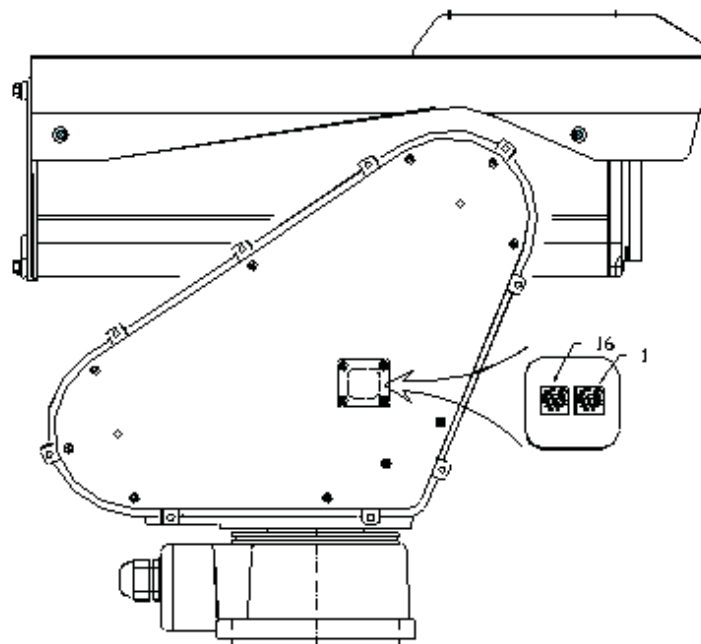


CAUTION

Attach necessarily all parts in several position.

In case discharge A does not become, serious failure cause can occur.

- 5.4 Attach right side Side Cover and complete external form.



Camera ID address

Factory Setting written next to ID cover

6. Camera Control Unit

The EV3000-P-CCD Camera Control Unit CCU has many smart function which make it easy to configure camera remotely through keyboard.

a- Zoom directions

To change Zoom Wide-Tele direction from keyboard send command “ goto preset 118” command

Every time this command is sent to EV3000-P-CCD, Zooming direction will be toggled.

GOTO PRESET No.	FUNCTION
GOTO PRESET 118	ZOOM WIDE/TELE Direction change

b- Semi Auto Focus

Setup Semi Auto-focus as follows :

⑪ Zoom-wide end ⑩ → ⑨ → ⑧ → ⑦ → ⑥ → ⑤ → ④ → ③ → ② → ① Zoom-tele end

NOTE : Point ① is zoom tele end and Point ⑪ is zoom wide end position of zoom lens.

Step-1) Move zoom position to Zoom tele end point(①) by zooming tele.

Adjust focus by focusing near/far at this point.

Send “ set preset 86” command.

Step-2) Move zoom position to point(②) by zooming wide and adjust focus by focusing near/far at this point.

Send “ set preset 87” command.

Step-3) Move zoom position to point(③) by zooming wide and adjust focus by focusing near/far at this point.

Send “ set preset 88” command.

Step-4) Move zoom position to point(④) by zooming wide and adjust focus by focusing near/far at this point.

Send “ set preset 89” command.

Step-5) Move zoom position to point(⑤) by zooming wide and adjust focus by focusing near/far at this point. Send “ set preset 90” command.

Step-6) Move zoom position to point(⑥) by zooming wide and adjust focus by focusing near/far at this point. Send “ set preset 91” command.

Step-7) Move zoom position to point(⑦) by zooming wide and adjust focus by focusing near/far at this point. Send “ set preset 92” command.

Step-8) Move zoom position to point(⑧) by zooming wide and adjust focus by focusing near/far at this point. Send “ set preset 93” command.
Step-9) Move zoom position to point(⑨) by zooming wide and adjust focus by focusing near/far at this point. Send “ set preset 94” command.
Step-10) Move zoom position to point(⑩) by zooming wide and adjust Focus by focusing near/far at this point.
Send “ set preset 95” command.

NOTE >>>The zoom position ⑩ is not zoom wide end point(⑪)
And Position ⑩ is very near position from position ⑪.
And also do not do anything at point ⑪.

Activating semi-auto focus function

Send “ goto preset 97” command.
After activating,Auto Focusing action will be automatically taken when zoom position is changed during zooming tele/wide operation.

De-activating semi-auto focus function

Send “ goto preset 96” command.
After De-activating,User has to operate focus near/far every time Zooming-wide/tele operation is made.
Semi-auto focus function is deactivated at the factory.

C- PAN/TILT Smart functions

If EV3000-P-CCD receives “ goto preset 99” command, Smart Pan/tilt drive function is activated and Pan/tilt drive speed is automatically adjusted according to Zoom ratio without moving to preset position no.99 which is original preset move operation.

Smart Pan/tilt drive function will be de-activated when EV3000-P-CCD receives “ goto preset 98” command.

GOTO PRESET No.	FUNCTION	REMARK
GOTO PRESET 99	Smart PAN/TILT Drive Function : Activated	
GOTO PRESET 98	Smart PAN/TILT Drive Function : De-activated	Default setting

Change Pan/Tilt Speed

If user wants to change preset moving speed, Do as follows.

– For preset positions

GOTO PRESET No.	PAN PRESET SPEED	TILT PRESET SPEED	REMARK
GOTO PRESET 111	80°/s	40°/s	Default speed value
GOTO PRESET 110	45°/s	28°/s	
GOTO PRESET 109	23°/s	14°/s	

– For normal operation

GOTO PRESET 108	60°/s	30°/s	
GOTO PRESET 107	55°/s	28°/s	
GOTO PRESET 106	49°/s	26°/s	
GOTO PRESET 105	42° /s	23° /s	
GOTO PRESET 104	35° /s	20° /s	
GOTO PRESET 103	28° /s	16° /s	
GOTO PRESET 102	21° /s	13° /s	
GOTO PRESET 101	13° /s	9° /s	
GOTO PRESET 100	6.5° /s	4.5° /s	

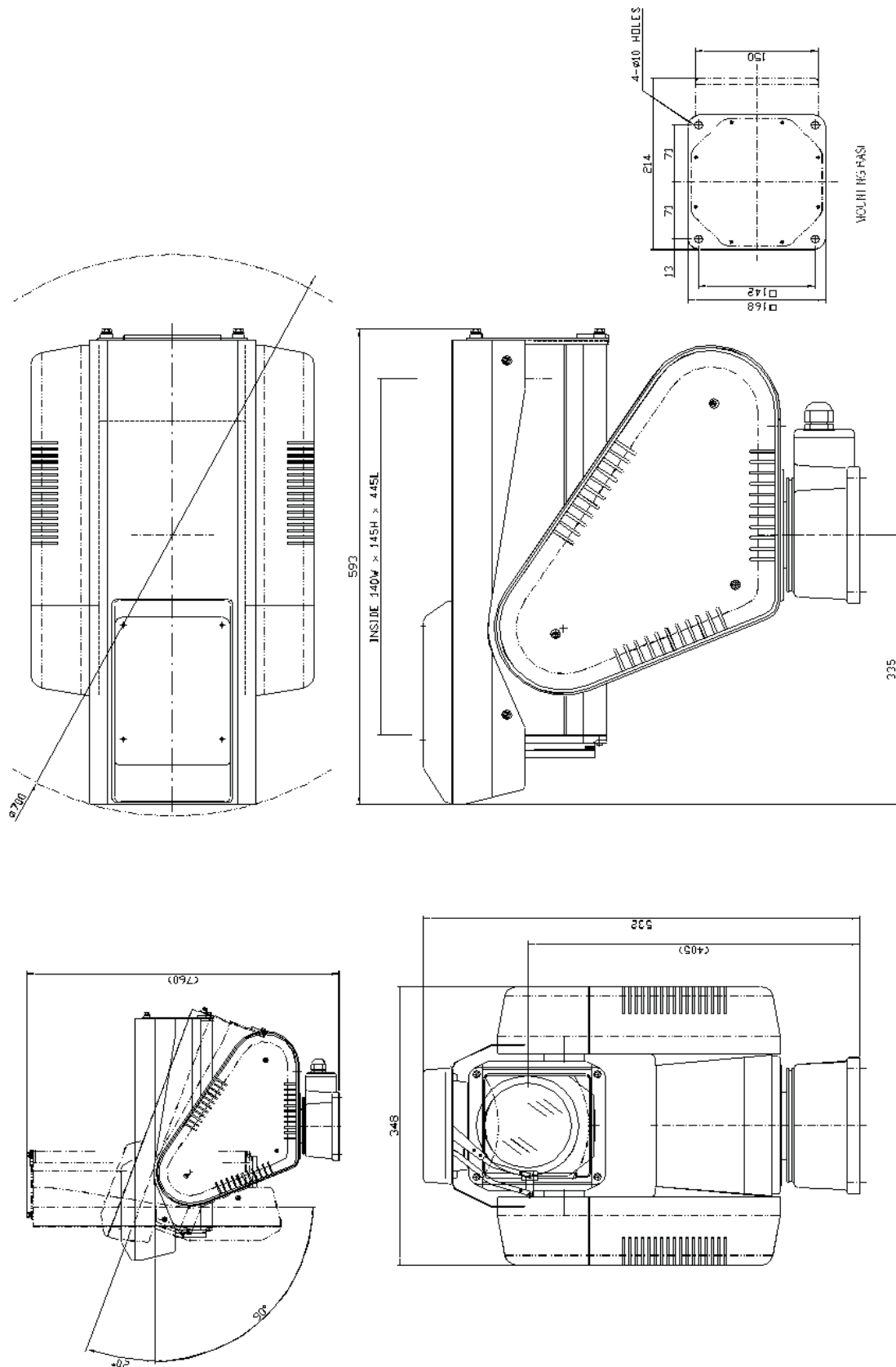
Note : Vibration may happen in hi-speed settings.

To minimized video shaking try to use low speed setting

d- Preset functions

GOTO PRESET No.	FUNCTION	REMARK
GOTO PRESET 130	SET MINIMUM LENS ZOOM/FOCUS VOLTAGE TO 6Volt at preset mode	Default setting
GOTO PRESET 131	SET MINIMUM LENS ZOOM/FOCUS VOLTAGE TO 9Volt at preset mode	
GOTO PRESET 119	INITIALIZE PAN/TILT(Same as RESET)	
GOTO PRESET 112~ 116	PRESET SPEED TESTING at factory	(Don't use)

7. Dimentional Drawing



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8. WARRANTY

● Product Warranty

MODEL No.		EV3000-P-EMCCD 300
SERIAL No.		
Date of purchased		
Place of Purchased		
c u s t o m e r	n a m e	
	a d d r e s s	

If the product breaks down during proper use, it will be repaired within 1 year from the date of purchase free of charge

Please contact us:

Tel. (413)592-8477

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Http://www.unitedvisionsolutions.com

Address: 10 Center st., Suite 401 & 402, Chicopee, MA 01013 USA

(Pleas refer to our web-site)

date	Detail	Agency	Repairman

Design and specifications are subject to change without notice for improving quality.

Appendix A Care and Handling of EV3000 Cameras

A.1 Cleaning Optics

Follow the lens cleaning instructions below.

- a. Examine lens surfaces carefully.

NOTE: Removal of the thin film coating will seriously degrade optical performance. A change in apparent color indicates the loss of coating.

- Remove all dust and debris with a soft bristle brush.
- Gently wipe the surface with a single stroke using pads moistened with a 50/50 mixture of isopropyl alcohol and acetone.

CAUTION: DO NOT rub lens hard!

- d. Drag lightly across surface just fast enough for the liquid to evaporate behind the moving pad. Refer to the figure on the next page.

This should leave no streaks.

CAUTION: DO NOT clean the lens in a circular motion!

Follow above procedure with dust cloth to remove any remaining dust.

A.2 Other External Surfaces

Clean as required with nonabrasive household cleaner.

A.3 Handling

Use care to ensure that the EV3000 is not excessively bumped or dropped. Even though the EV3000 is a rugged instrument, it should be treated very carefully like any other sophisticated camera.

Appendix B

Glossary

Atmospheric Attenuation – The amount of radiated IR energy that is absorbed by the atmosphere. It is a function of the temperature and humidity, particles in the air (i.e. fog, smoke, smog, etc.) and wavelength, among other factors.

CCIR - Video standard for monochrome, 50 field/sec interlaced video output (i.e. European standard black and white video).

Critical Dimension – The dimension of a target used in calculating the DRI performance. It is a function of length, width and height, as well as what face of the target is presented to the imager.

DRI (Detection-Recognition-Identification) – A method of characterizing the range performance of a thermal imager according to a standard set of criteria using a standard atmospheric model, and a target of alternating black and white stripe (cycles) at different temperatures.

Detection – The minimum distance at which an imager can reproduce a single cycle (black/white stripe) of a target. Typically used to represent the distance at which the imager can first detect a given target (i.e. a hot blob). In addition to the imager, the detection range is also a function of the target size and temperature difference from the background.

Field of View (FOV) – The area in space that is seen by the lens of a thermal imager. Usually expressed in degrees, and specified for both horizontal and vertical dimensions. The FOV is a characteristic of the lens.

FLIR 92 – A set of standards defined by the Night Vision Laboratories for calculating DRI information.

F-Number – Focal Length/Diameter of Lens (same as in a visible lens). A lower F-number means that more IR radiation passes through, but the lens is larger.

Focal Plane Array (FPA) – An integrated circuit with a two dimensional matrix of detector elements that sits in the focal plane of the thermal imager. An imager that uses an FPA is referred to as a “staring” imager because the entire array stares at the scene to collect IR energy to make an image.

Hyperfocal Distance – The distance beyond which all objects are in focus when an imagers’ focus adjust is set to infinity.

Infrared Imager – An Instrument that collects infrared energy and produces a video image where the gray scale values correspond to differences in temperature.

Indium Antimonide (InSB) – Semiconductor material used in the fabrication of a cooled FPA.

Typically pronounced “Inns-Bee”, these detectors must be cooled to 77°K to operate.

Identification – The distance at which an imager can resolve six cycles across a given target. Used to describe the distance at which a target can be clearly identified (in the case of a truck, the ability to discriminate between a T-72 and a Humvee). In addition to the imager, the recognition range is also a function of the target size and temperature difference from the background.

Infrared (IR) – The portion of the electromagnetic spectrum located just above visible light. The infrared spectrum extends from just above red (0.7 micron) to about 12 micron.

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	For application support	info@unitedvisionsolutions.com