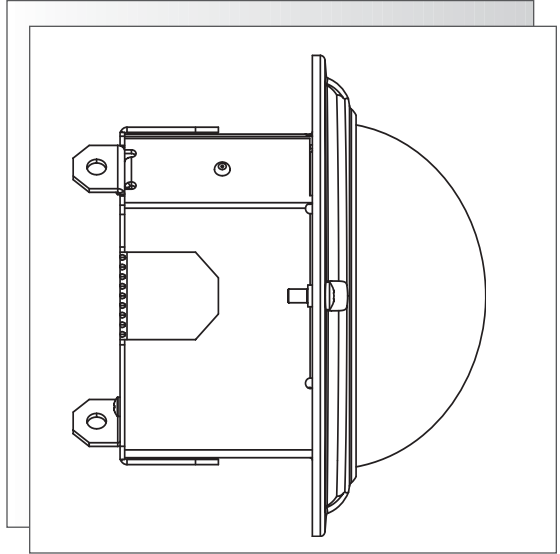


## **MINILINE VANDAL RESISTANT RECESSED MOUNT DOMES**



**MLAR SERIES**

## SAFETY PRECAUTIONS



### CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN!



CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This label may appear on the bottom of the unit due to space limitations.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNITS TO RAIN OR MOISTURE.



**Attention:** Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

### 24 VAC Units:

Do Not Exceed 30 VAC Input. Voltage applied to the unit's power input should not exceed 30 VAC. Normal input voltage is 24 VAC. User supplied wiring from 24 VAC supply to unit must be in compliance with electrical codes (Class 2 power levels). Do not ground 24 VAC supply at power supply terminals or at unit's power supply terminals.

## SECURITE



**ATTENTION**  
RISQUE D'ÉLECTROCUTION.  
NE PAS OUVRIR



DANGER: POUR ÉVITER TOUT RISQUE D'ÉLECTROCUTION, NE PAS OUVRIR LE BOÎTIER. IL N'Y A PAS DE PIÈCES REMPLAÇABLES À L'INTÉRIEUR. POUR TOUTE RÉVISION, S'ADRESSER À UN TECHNICIEN SPÉCIALISÉ.

En raison de limitation de place, cette étiquette peut être placée sur le dessous de l'appareil.



L'éclair fléché dans un triangle équilatéral, avertit l'utilisateur de la présence d'une "tension dangereuse" non isolée à l'intérieur de l'appareil et d'une valeur suffisante pour constituer un risque d'électrocution.



Le point d'exclamation contenu dans un triangle équilatéral, avertit l'utilisateur de la présence, dans la documentation qui accompagne l'appareil, de consignes d'utilisation et de maintenance importantes.

ATTENTION: POUR ÉVITER LE RISQUE D'ÉLECTROCUTION OU D'INCENDIE, NE PAS EXPOSER À LA PLUIE OU À L'HUMIDITÉ UN APPAREIL.



**Attention:** L'installation doit être effectuée uniquement par du personnel de service qualifié conformément à la réglementation du Code Electrique National ou à la réglementation locale.

### Appareils 24 VCA

Ne pas excéder 30 VCA. La tension appliquée à l'entrée d'alimentation de l'appareil ne devrait pas excéder 30 VCA. Toute installation électrique fournissant du 24 Volts courant alternatif doit être conforme aux codes électriques. (Niveaux d'alimentation de la Classe 2). Ne pas brancher une prise de terre sur les bornes d'alimentation 24 Volts ou aux bornes d'alimentation de l'appareil.

## SICHERHEITSVORKEHRUNGEN



**VORSICHT**  
RISICO EINES ELEKTRISCHEN  
SCHLAGES NICHT OFFNEN!



VORSICHT: UM EINEN ELEKTRISCHEN SCHLAG ZU VERMEIDEN, ABDECKUNG NICHT ENTFERNEN. WARTUNGEN ALLER ART QUALIFIZIERTEM PERSONAL ÜBERLASSEN.

Aus Platzgründen kann diese Warnung auf der Unterseite des Gerätes angebracht sein.



Das Blitzsymbol im gleichseitigen Dreieck soll den Benutzer auf nicht isolierte "Hochspannung" im Gehäuse aufmerksam machen, die eventuell stark genug ist, um einen elektrischen Schlag zu verursachen.



Das Ausrufezeichen im gleichseitigen Dreieck soll den Benutzer auf wichtige Bedienungs- und Wartungsanleitungen in der dem Gerät beigefügten Literatur aufmerksam machen.

WARNUNG: UM FEUER ODER ELEKTRISCHE SCHLÄGE ZU VERMEIDEN, SETZEN SIE DAS GERÄT NIEMALS REGEN ODER FEUCHTIGKEIT AUS.



**Achtung!** Die Installation sollte nur von qualifiziertem Kundendienstpersonal gemäß jeweilig zutreffender Elektrovorschriften ausgeführt werden.

### 24 VAC Geräte

Achtung! 30 Volt Eingangswechselfspannung darf für 24 VAC Modelle nicht überschritten werden. Normal-betrieb findet bei 24 Volt Wechselfspannung statt. Die Kabel- bzw. Drahtverbindung vom Netzgerät zu dem vor-liegenden Gerät muß die Bestimmungen der Schutz-klasse II erfüllen. Nicht die 24-Volt-Leitung erden weder am Netzgerät noch an den Anschlußklemmen des vor-liegenden Gerätes

## PRECAUCIONES DE SEGURIDAD



### PRECAUCION

RIESGO DE CHOQUE  
ELECTRICO INO ABRIR!!



PRECAUCION: PARA REDUCIR EL RIESGO DE CHOQUE ELÉCTRICO, FAVOR NO ABRIR LA CUBIERTA. ESTE EQUIPO NO CONSTA DE PIEZAS O PARTES QUE REQUIEREN SERVICIO O MANTENIMIENTO. PARA REPARACIONES FAVOR REFERIRSE A UN TÉCNICO CALIFICADO.

Debido a limitaciones de espacio, esta etiqueta puede aparecer en la parte inferior de la unidad.



El símbolo representado por un relámpago con punta de flecha dentro de un triángulo equilátero, se muestra con el objetivo de alertar al usuario que existen "voltajes peligrosos" sin aislamiento, dentro de la cubierta de la unidad. Dichos voltajes pueden ser de tal magnitud que constituyen un riesgo de choque eléctrico a personas.



El símbolo de exclamación dentro de un triángulo equilátero, se muestra con el objetivo de alertar al usuario de que instrucciones de operación y mantenimiento importantes acompañan al equipo.

PELIGRO: PARA EVITAR EL PELIGRO DE INCENDIO Ó CHOQUE ELÉCTRICO, NO EXPONGA A LA LLUVIA Ó HUMEDAD.



**Atención:** La instalación de este equipo debe ser realizada por personal capacitado, solo en acuerdo, y en cumplimiento de normas del "National Electric Code" (Código Eléctrico Nacional) ó las normas del Gobierno Nacional Local.

### Unidades de 24 VCA

No exceder 30 VCA de entrada. Voltage suplido a la unidad no debe exceder 30 VCA. Voltage de entrada normal es de 24 VCA. El cableado de 24 VCA provisto por el usuario debe cumplir con las normas eléctricas (Clase 2 de niveles de alimentación). No conectar los 24 VCA a tierra en las terminales de la alimentación ó a las terminales de la fuente de alimentación de la unidad.

## **FCC & ICES INFORMATION**

### **(U.S.A. and Canadian Models Only)**

**WARNING** - This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Intentional or unintentional changes or modifications not expressly approved by the party responsible for compliance shall not be made. Any such changes or modifications could void the user's authority to operate the equipment.

If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No.004-000-00345-4.

**WARNING: THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT, THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.**

## **1. UNPACKING**

Unpack carefully. This is an electromechanical device and should be handled carefully. Check to ensure that the following items are included:

- Integrated camera/housing unit
- Hardware kit containing (2) 6-32 x 3/4 mounting screws

If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. If any items are missing, notify Aigis Mechtronics.

The shipping carton is the safest container in which the unit may be transported. Save it for possible future use.

## **2. SERVICE**

If the unit ever needs repair service, the customer should contact Aigis Mechtronics for return authorization and shipping instructions, 1-800-523-6500.

### 3. DESCRIPTION

The MLAR Series Domes are small, discreet surveillance domes containing high performance 1/4-inch CCD cameras.

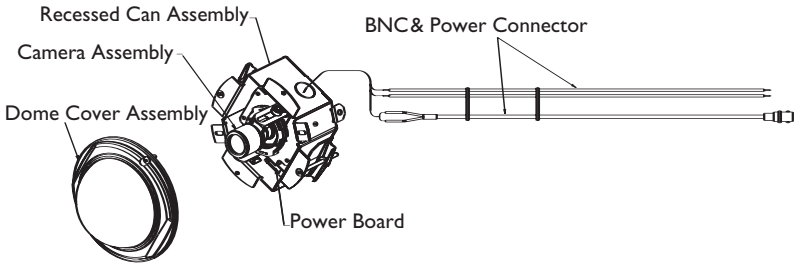


Figure 1 Dome Assembly

### 4. INSTALLATION

Attention: Installations should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Model No.	Voltage Range	Power
PAL Models	21 to 27 VAC, 50 Hz or 11 to 13 VDC	2.7 W
NTSC Models	21 to 27 VAC, 60 Hz or 11 to 13 VDC	2.7 W

#### 4.1 Preparing the Unit

Remove the integrated camera/dome unit from the carton. Feed wires through opening and if necessary, break tab.

#### 4.2 Connecting Low Voltage Power & Video Signal

The wiring harness will have a BNC connector to accept video coax and two push-wire connectors to accept the low voltage power. For mounting to an electrical box, run power and video lines through a knockout into the box (not provided). For mounting directly to a wall or ceiling, run power and video lines via conduit to the desired location.

**Caution: Before proceeding, be sure to disconnect the power from the cable to be installed into the unit. Be sure that the unit is of the proper voltage type for the line power being used.**

### 4.2.1 Connecting Low Voltage Power

1. Prepare the camera's low voltage wires by stripping 9-11 mm (0.39 inch) from each wire. The push-wire connector is designed to accommodate AWG 20-16 wire.
2. Connect the line and neutral wires. To connect, press the button on the connector fully as indicated on the connector. Insert the stripped conductor into the square entry and release.
3. **DC Applications:** The neutral/common wire for 12 VDC supply is to be installed in the connector on the black wire. The 12 VDC supply wire is to be installed in the connector on the red wire.

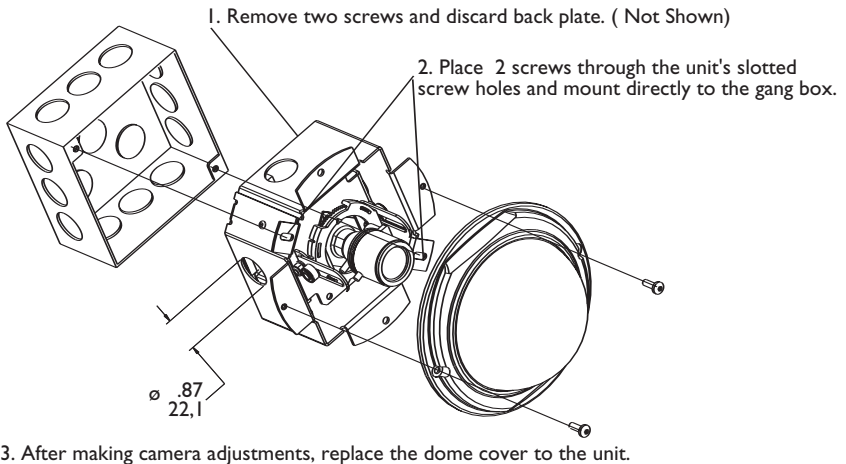
**AC Applications:** The camera's operation is not effected by the polarity of the 24 VAC wires. However in multiple camera systems consistent wiring configurations will help maintain roll-free switching.

### 4.2.2 Connecting Video Cable

1. Route and connect video cable to BNC connector.

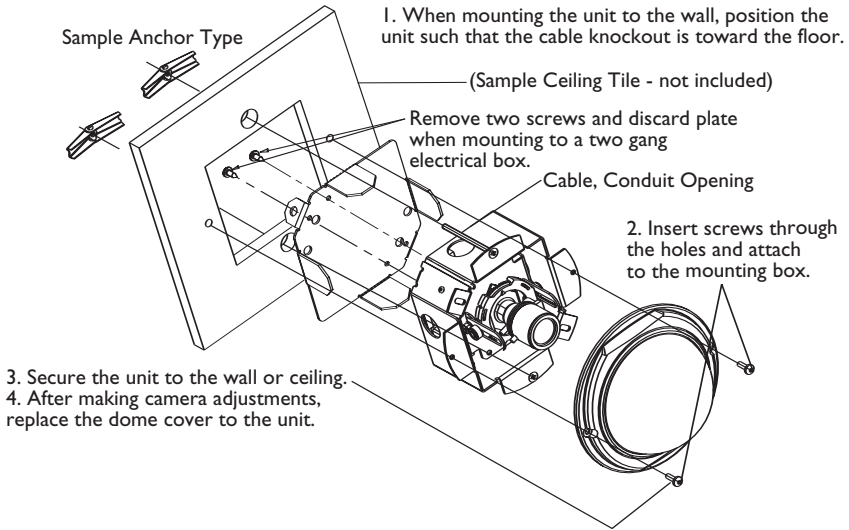
### 4.3 Mounting

This unit is designed to mount to a two gang deep electrical box (see **Figure 2**) or the unit can be mounted to a ceiling or wall without a gang box (see **Figure 3**).



**Figure 2 Two-Gang Electrical Box Mount**



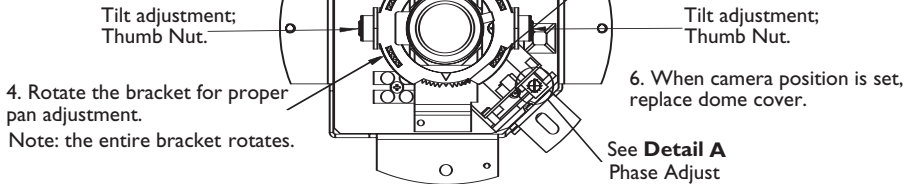


**Figure 3 Wall or Ceiling Mount**

## 5. CAMERA ADJUSTMENT

### 5.1 MLAR VariFocal Series

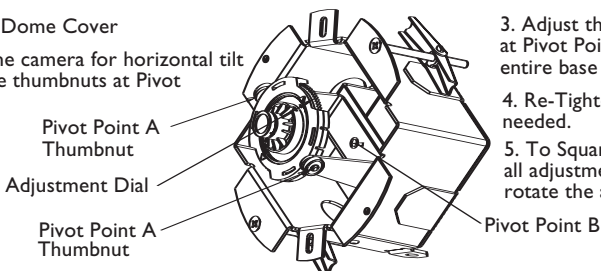
1. Remove Dome Cover.
2. Adjust the camera for vertical and horizontal tilt using the Thumb Nut.
3. Adjust for proper tilt orientation by using the Thumb nut.



**Figure 4 VariFocal Series Adjustment Points**

### 5.2 MLAR Fixed Focal Series

1. Remove Dome Cover
2. Adjust the camera for horizontal tilt by using the thumbnuts at Pivot Points A.
3. Adjust the base for proper Pan at Pivot Point B by rotating the entire base bracket.
4. Re-Tighten the thumbnuts as needed.
5. To Square the camera once all adjustments are made rotate the adjustment dial.



**Figure 5 Fixed Focal Series Adjustment Points**

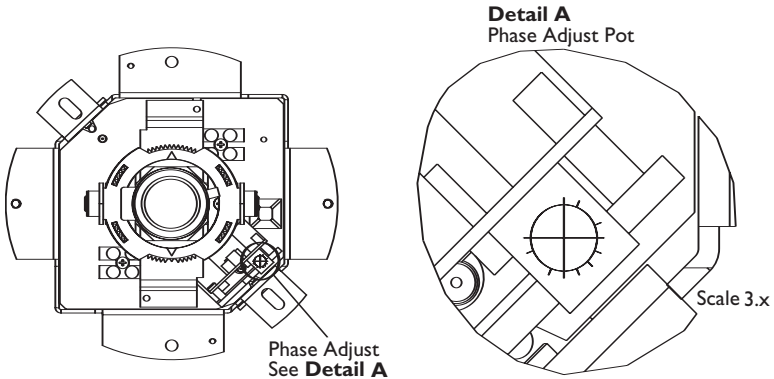
## 6. CAMERA AND LENS SETTINGS

### 6.1 MLAR VariFocal Series

The Camera module has various settings for any additional adjustments that may be required. See **Figure 6 and 7** for adjustment locations.

#### 6.1.1 Phase Adjust

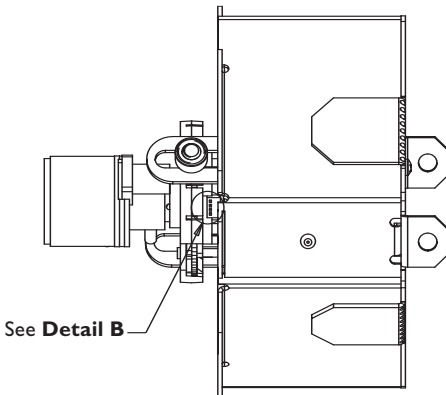
The phase adjust control is located on the power board next to the power cable connections (see **Figure 6**). To adjust phase, use a small screwdriver to rotate control (blue block with yellow screw hole) until picture is synchronized with other cameras in the system.



**Figure 6 Camera Assembly**

#### 6.1.2 Dip Switch Location and Settings

See **Detail B** for dip switch information.

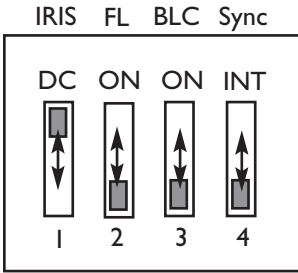


**Figure 7 Dip Switch Location**

# DETAIL B Dip Switch Settings

The following chart diagrams the selectable dip switches and their respective functions:

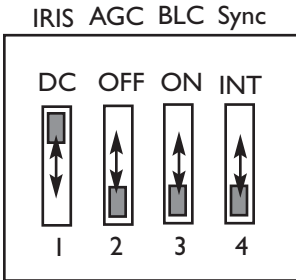
## Color Camera



Note: is factory set up

1	IRIS	DC	DC IRIS
		AES	AES
2	Flickerless (FL)	ON	Shutter speed to be fixed at 1/100 sec.
		OFF	Normal position
3	Backlight Compensation (BLC)	ON	Set to this position when a strong light is in the back ground.
		OFF	Normal position
4	Synchronization Mode	INT	Internal Synchronization mode
		L.L.	Line lock mode

## Black & White Camera

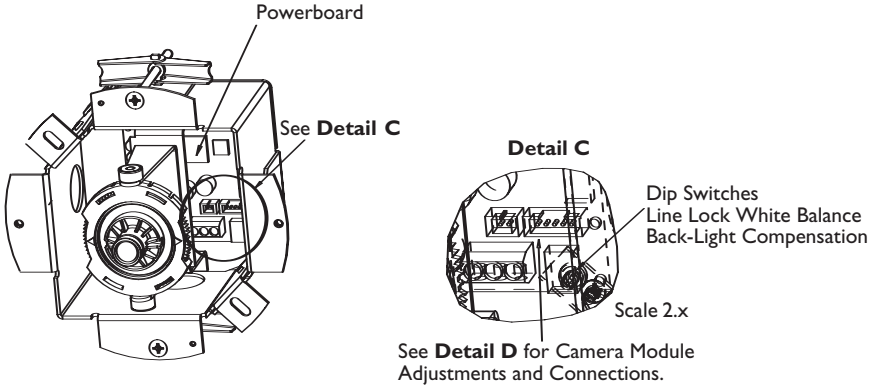


Note: is factory set up

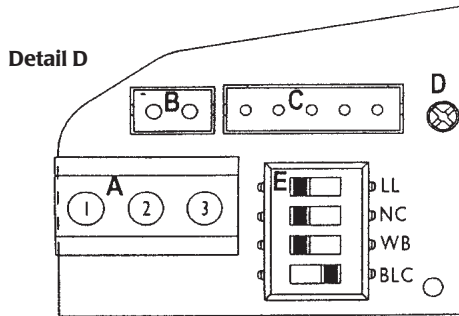
1	IRIS	DC	DC IRIS
		AES	AES
2	Auto Gain Control (AGC)	OFF	Gain Level to be fixed at min.
		ON	Set to this position to improve camera sensitivity in low light conditions.
3	Backlight Compensation (BLC)	ON	Set to this position when a strong light is in the back ground.
		OFF	Normal position
4	Synchronization Mode	INT	Internal Synchronization mode
		L.L.	Line lock mode

## 6.2 MLAR Fixed Focal Series

As received, the unit will be set such that the line lock is on, the backlight compensation is off and automatic white balance is on (color models only).



**Figure 6 Fixed Focal Camera Adjustments**



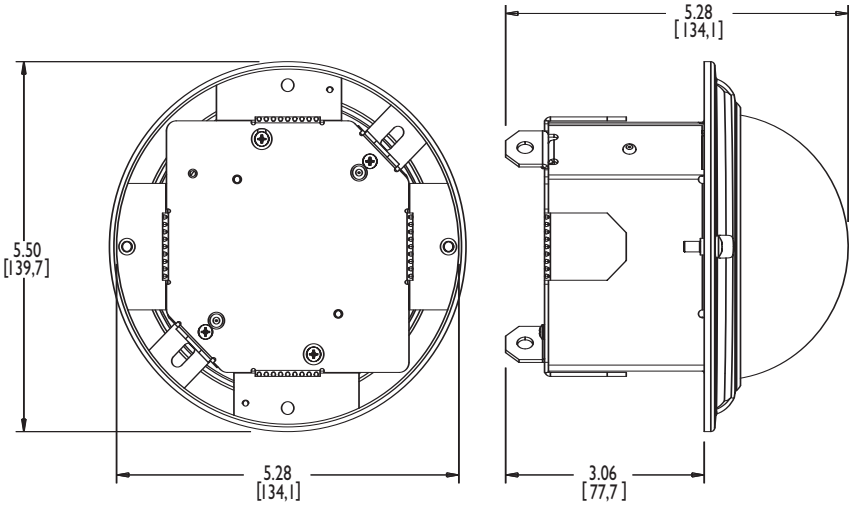
**Camera Module Adjustments and Connections**

- |   |  |
|---|--|
| <p><b>A</b> -Power Block</p> <ol style="list-style-type: none"> <li>1. Supply</li> <li>2. Secondary GND<br/>(Do not connect)</li> <li>3. Supply (Supply accepts 24 Vac or 12Vdc, polarity independent, galvanically isolated from video GND)</li> </ol> <p><b>B</b> - Video Cable Output Connection</p> | <p><b>C</b> -DC Iris Cable Connection</p> <p><b>D</b> -Vphase Adjustment<br/>Adjust control until desired setting is achieved</p> <p><b>E</b> - Default Dipswitch Settings</p> <ul style="list-style-type: none"> <li>On - LL (Line Lock)</li> <li>NC (Not Connected)</li> <li>On - WB (White Balance)</li> <li>Off - BLC (Back Light Compensation)</li> </ul> |
|---|--|

# 7. REPLACEMENT PARTS

315 4275 XXX Dome Cover

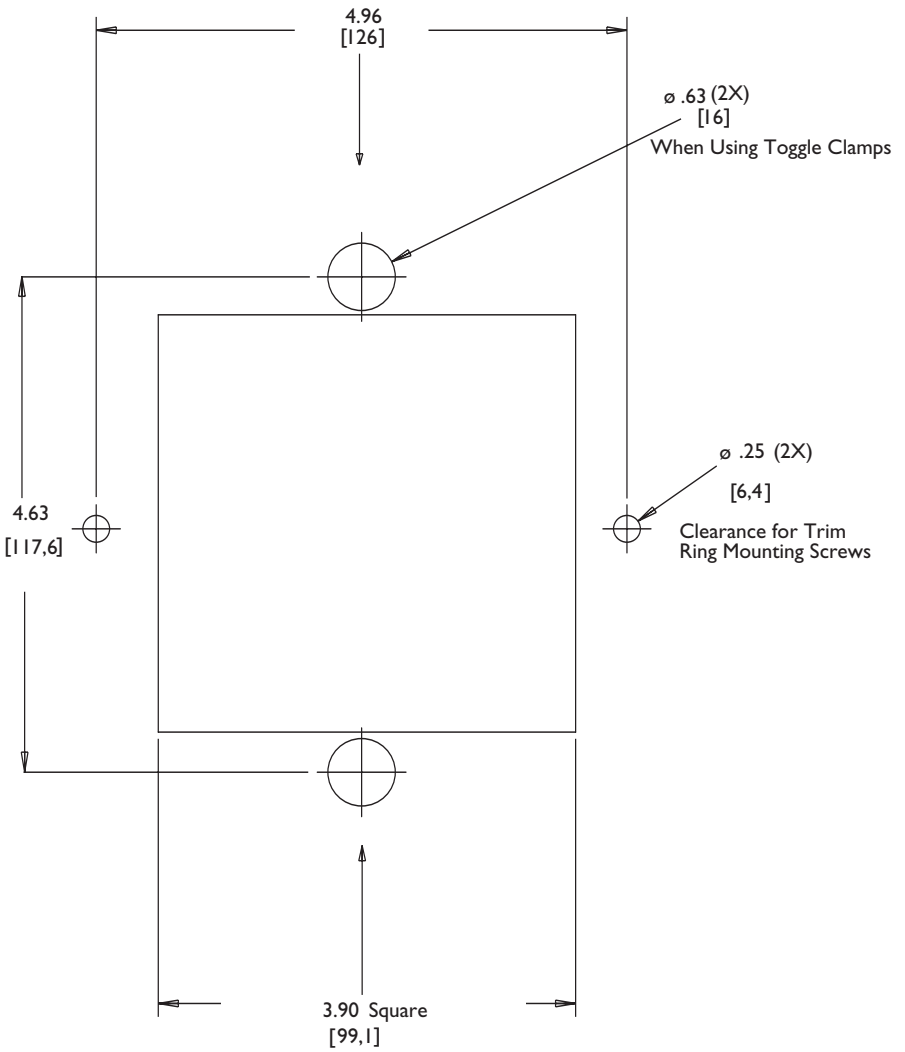
# 8. DIMENSIONAL OUTLINE



## 9. CAMERA SPECIFICATIONS

		monochrome		color	
OPTION		-MS	-MH	-CS	-CH
Horizontal Resolution		380 TVL	570 TVL	330 TVL	480 TVL
Voltage Range	-1	fixed lens 12-24 VAC or 12-36 VDC, 50 Hz varifocal lens 21-27 VAC or 11-13 VDC, 50 Hz			
	-2	fixed lens 12-24 VAC or 12-36 VDC, 60 Hz varifocal lens 21-27 VAC or 11-13 VDC, 60 Hz			
Power		3W			
Sensitivity minimum scene illumination f/1.2 lens, 50 IRE		fixed lens 0.2 lux varifocal lens 0.12 lux	fixed lens 1.6 lux varifocal lens 1.2 lux		
Imager		1/4-inch Image Format; Interline Transfer CCD			
System	-1	CCIR		PAL	
	-2	EIA		NTSC	
Signal to Noise		Fixed - 48dB		Varifocal - more than 50dB	
Electronic Shutter		1/50 (1/60 EIA) to 1/100,000			
Backlight Compensation		Selectable On/Off Control			
White Balance		N/A		Automatic Sensing through the Len (TTL System): +2700 K to 9000 K.	
Video Output		Composite; 1.0 Vp-p, 75ohm			
Synchronization	AC	Line-lock: (AC supplied)			
	DC	Crystal-lock: (DC supplied or Line-Lock off)			
Phase Adjust		0° to 330°			
Connector	Video	BNC			
	Power	In-line push wire connectors			
Controls	Fixed	Line lock on/off; ATW/AWB hold; BLC on/off			
	Varifocal	Iris - DL/AE AGC - on/off BLC - on/off Sync mode - INT/L.L.	Iris - DL/AES Flickerless - on/off BLC - on/off Sync mode - INT/L.L.		
Options		-N Includes unshielded twisted pair transmitter compatible with NVT receivers. Permits video transmission of up to 1000 ft when passive receiver is used & 3000 ft when active receiver is used.			

# 10. MOUNTING TEMPLATE





mechtronics

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