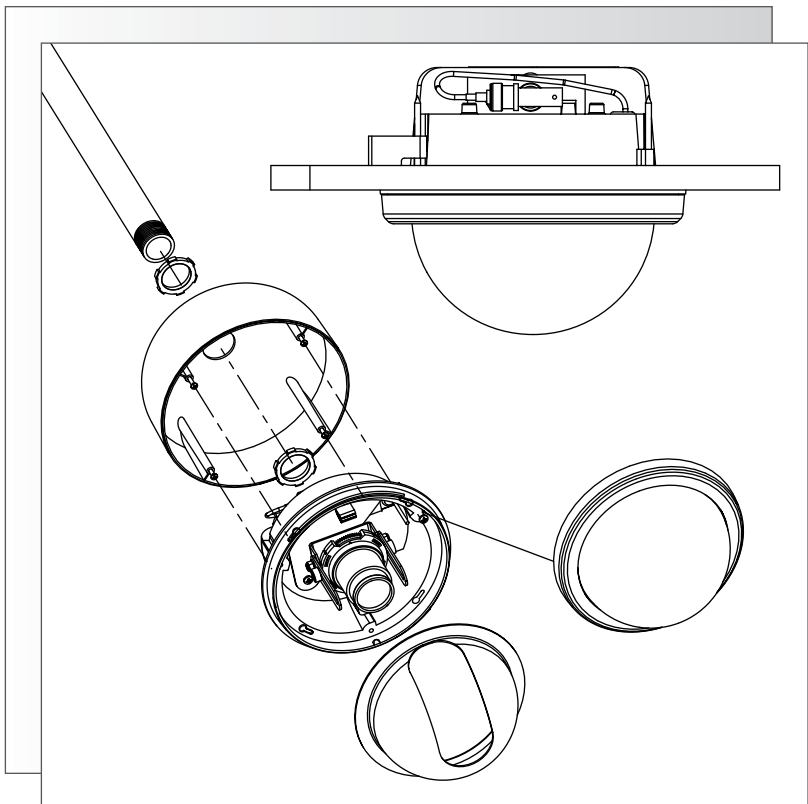


## 5-INCH IN-CEILING/PENDANT INTEGRATED DOME PACKAGE



**IND5 SERIES**

# IMPORTANT SAFEGUARDS

1. Read Instructions - All the safety and operating instructions should be read before the unit is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture - Do not use this unit near water - for example, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or in any area which is classified as a wet location.
8. Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only with a stand, tripod, bracket, or mount recommended by the manufacturer or sold with the product. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.



An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. Ventilation - Openings in the enclosure, if any, are provided for ventilation, to ensure reliable operation of the unit, and to protect it from overheating. These openings must not be blocked or covered. This unit should not be placed in a built-in installation unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. Power Sources - This unit 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 supply you plan to use, consult your dealer or local power company. For units intended to operate from battery power or other sources, refer to the operating instructions. This equipment is to be isolated from the mains supply by a limited power source as specified in EN60950:1992 Clause 2.11.
11. Grounding or Polarization - This unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.  
Alternately, this unit may be equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. 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 and plugs, convenience receptacles, and the point where they exit from the appliance.
13. Power Lines - An outdoor 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 outdoor system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.
14. Overloading - Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
15. Object and Liquid Entry - Never push objects of any kind into this unit 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 unit.

16. Servicing - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Damage Requiring Service - Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
  - a. When the power supply cord or plug is damaged.
  - b. If liquid has been spilled or objects have fallen into the unit.
  - c. If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
  - d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
  - e. If the unit has been dropped or the cabinet has been damaged.
  - f. When the unit exhibits a distinct change in performance—this indicates a need for service.
18. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Safety Check - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
20. Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded. U.S.A. models only—Section 810 of the National Electrical Code, ANSI/NFPA No.70-1981, provides information with respect to proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
21. Lightning - For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power-line surges.

## 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 radiates 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.**

## SECURITY

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

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.



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

### Warning



**To prevent fire or shock hazard, do not expose units to rain or moisture.**

**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.



This equipment is to be isolated from the mains supply by a limited power source as specified in EN60950:1992 Clause 2.11.

## SECURITE

	<b>ATTENTION</b> RISQUE D'ÉLECTROCUTION. NE PAS OUVRIR	
<b>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.</b>		

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: 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.

### Attention:

**Pour éviter le risque d'électrocution ou d'incendie, ne pas exposer à la pluie ou à l'humidité un appareil.**

**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

	<b>VORSICHT</b> STROMSCHLAGEGFAHR! BITTE NICHT ÖFFNEN!	
<b>VORSICHT: UM EINEN ELEKTRISCHEN SCHLAG ZU VERMEIDEN, ABDECKUNG NICHT ENTFERNEN. WARTUNGEN ALLER ART QUALIFIZIERTEM PERSONAL ÜBERLASSEN.</b>		

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 beigelegten Literatur aufmerksam machen.





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

### Warnung

**Um Feuer oder elektrische Schläge zu vermeiden, setzen Sie das Gerät niemals Regen oder Feuchtigkeit aus.**

**24 VAC Geräte:** Achtung! 30 Volt Eingangsspannung darf für 24 VAC Modelle nicht überschritten werden. Normalbetrieb findet bei 24 Volt Wechselspannung statt. Die Kabel- bzw. Drahtverbindung vom Netzgerät zu dem vorliegenden Gerät muß die Bestimmungen der Schutzklasse II erfüllen. Nicht die 24-Volt-Leitung erden weder am Netzgerät noch an den Anschlußklemmen des vorliegenden Gerätes

## PRECAUCIONES DE SEGURIDAD

	<b>PRECAUCION</b> RIESGO DE CHOQUE ELECTRICO. ¡NO ABRIR!	
<b>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.</b>		

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.



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.

### Peligro

**Para evitar el peligro de incendio ó choque eléctrico, no exponga a la lluvia ó humedad.**

**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.

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# 1 UNPACKING

Unpack carefully. This is electromechanical equipment and should be handled with care.

Check to be sure that all of the following parts are included:

- Dome housing with camera and lens.
- Dome top cover (pendant versions only).

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 MODEL NUMBERS

Model No. <sup>1</sup>	Description	Voltage	Power
INDxRMSxx	Indoor, In-ceiling, 1/4-inch, B/W, 380 TVL	24 VAC	3 W
INDxRCSxx	Indoor, In-ceiling, 1/4-inch, Color, 330 TVL	24 VAC	3 W
INDxPMSxx	Indoor, Pendant, 1/4-inch, B/W, 380 TVL	24 VAC	3 W
INDxPCSxx	Indoor, Pendant, 1/4-inch, Color, 330 TVL	24 VAC	3 W

1. **NOTE:** a **W** at the end of a number indicates a Wall-mounted version (e.g. IND52PMS38W).

# 3 SERVICE

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

# 4 INSTALLATION



**ATTENTION:** Installation should be performed by qualified service personnel only, in accordance with the National Electrical Code or applicable local codes. Refer to applicable installation section.

## 4.1 In-ceiling Model (INDxRx Series)

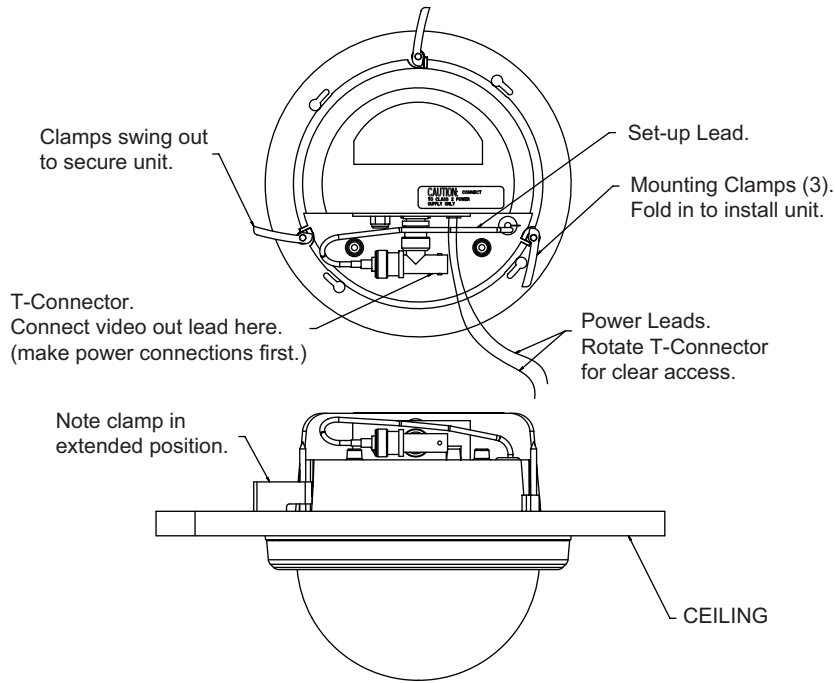


**CAUTION:** These units must be properly and securely mounted to a supporting structure capable of sustaining the unit weight. Use care when selecting mounting hardware (not supplied) for installation, the mounting surface and unit's weight should be carefully considered.

1. Use 2 pencils or a pencil and nail with provided template to cut a 146 mm (5.75-inch) diameter hole in the ceiling where required. The template is found at the top of the shipping carton, attached to the package insert. Connect low voltage power and video (see **Figure 1**).

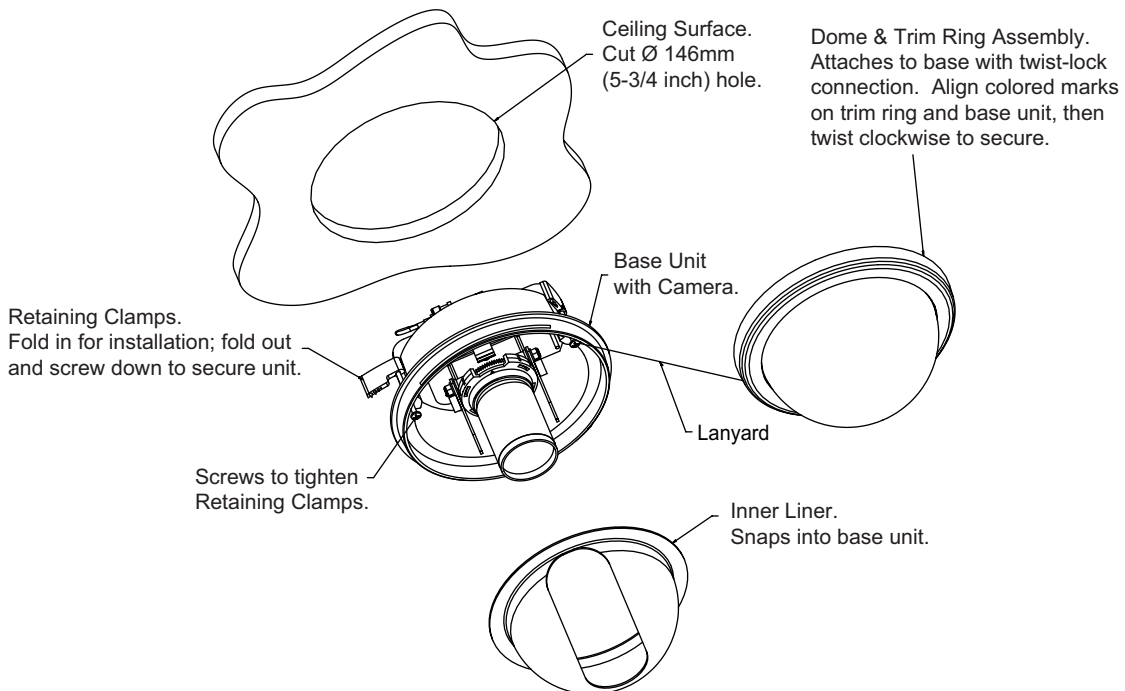
**NOTE:** Power and video can be connected before or after the unit is mounted into the ceiling:

- a. Connect the line and neutral wires to the terminal block in the back of the housing.
- b. Route and connect video cable to the BNC connector also located on the back of the housing.



**Figure 1 Ceiling Mount Power & Video Connections**

2. Install the base assembly box into the precut hole until the base's flange hits the ceiling. Tighten the three screws that serve to lower the mounting clamps to grab on to the ceiling. Be sure the clamps are secure against the ceiling (see **Figure 2**).
3. Adjust the camera module for proper viewing angle. See **Section 4.3** for more information on camera adjustments.
4. Once the camera is positioned properly, install the black inner liner and align the viewing slot with the camera and lens (see **Figure 2**).
5. When the inner liner is properly located, install the dome and trim ring by lining up the colored dots and rotating clockwise until it is locked in place.



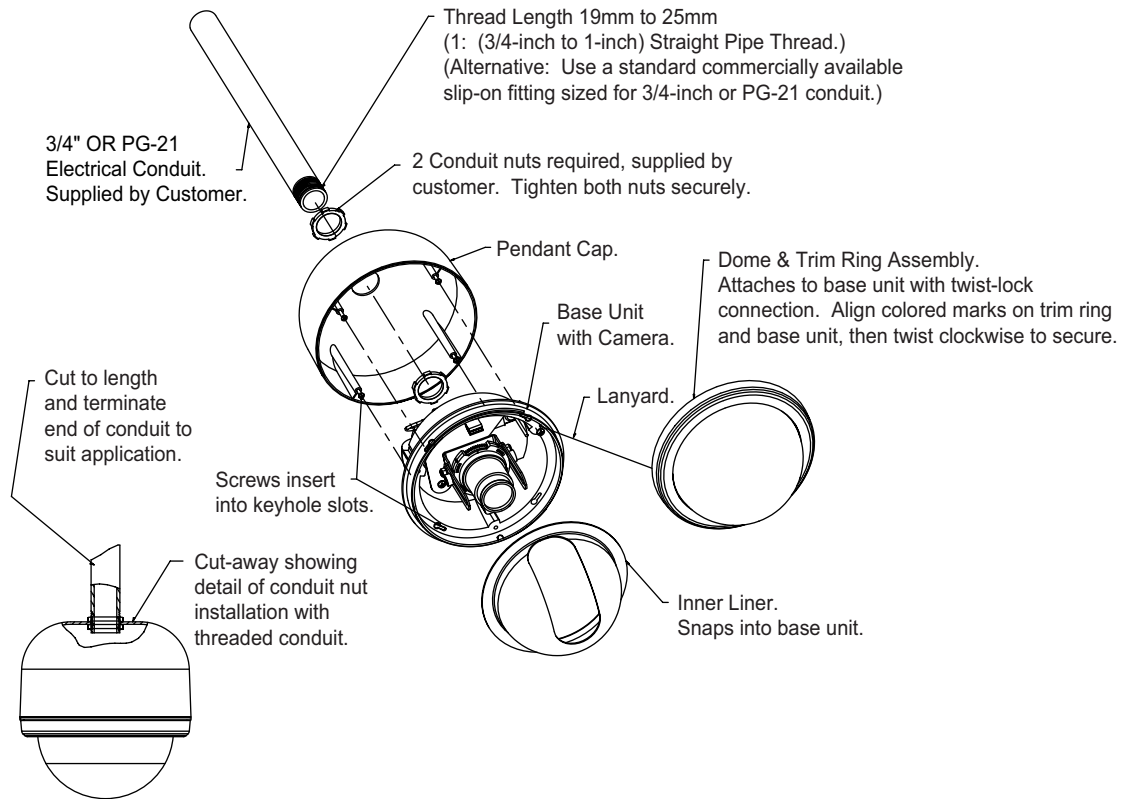
**Figure 2 In-ceiling Installation**

## 4.2 Pendant Model (INDxPx Series)

The pendant mount version of the IND Series can be wall or conduit/pipe mounted.

### 4.2.1 Conduit/Pipe Mounting

1. When pendant mounting a vertical conduit, route power/video cables through your mounted conduit. Then, route these cables through the removable pendant cap.
2. Attach the 3/4-inch (NPT) conduit to the top of the pendant cap using two conduit nuts as shown in **Figure 3**. Conduit and conduit nuts are not supplied.

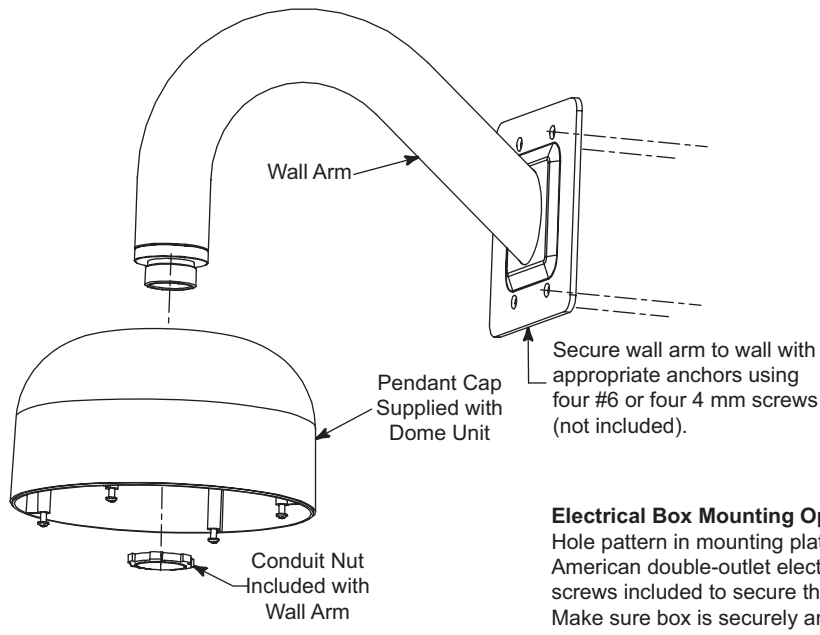


**Figure 3 Pendant Pipe Mount Installation**

3. Route power/video cables to the terminal block and BNC connector located on the back of the housing and make proper connections. See **Figure 1**.
4. Attach base camera/lens unit to pendant cap by lining up and joining the cap's four studs to the slots located on the back of the base unit. Twist the housing to lock it into place (see **Figure 3**).
5. See **Section 4.1, Steps 3–5** to complete the installation.

### 4.2.2 Wall Mounting

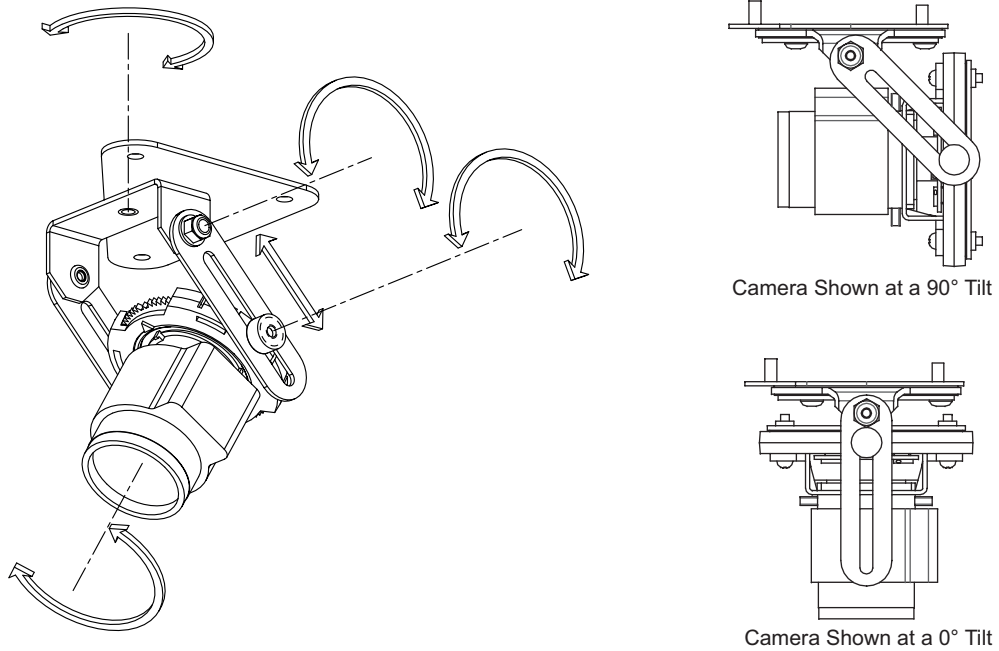
1. Wall mount the unit using the IND5AMT wall mount.
2. When wall mounting, route power/video cables through the wall mount. Securely mount the bracket in the desired location using four fasteners (see **Figure 4**) that are appropriate for the type of wall.
3. Feed power/video cables through removable pendant cap and attach cap to mount using the supplied conduit nut (see **Figure 4**).
4. Route power/video cables to the terminal block and BNC connector located on the back of the housing and make proper connections (see **Figure 1**).
5. Attach base camera/lens unit to pendant cap by lining up and joining the cap's four studs to the slots located on the back of the base unit. Twist the housing to lock it into place (see **Figure 3**).
6. See **Section 4.1, Steps 3-5** to complete the installation.



**Figure 4 Pendant Wall Mount Installation**

### 4.3 Camera Adjustments

- I. The camera can manually pan, tilt, or rotate 360 degrees. See **Figure 5** for a diagram of these adjustments.

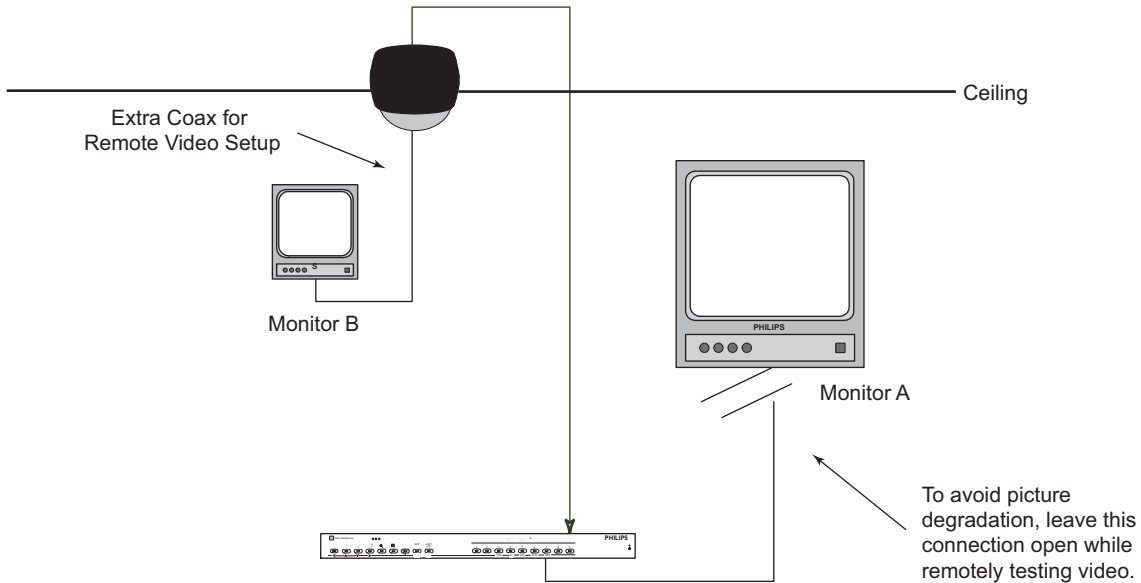


**Figure 5 Camera Position Adjustments**

## 4.4 Remote Video Setup

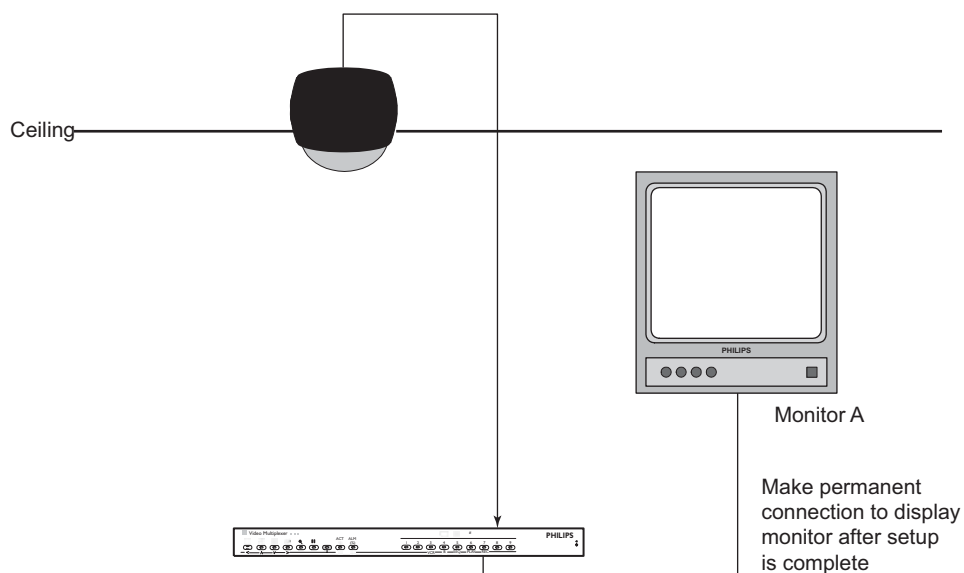
A second coaxial cable is included to allow the installer to set up the video at the camera site using a small spare monitor. Refer to the following steps for this procedure.

1. After the power and video connections are made to the camera and the dome is mounted correctly, connect the setup coax cable with BNC located next to the camera/lens module to the remote monitor. See **Figure 6a** for an example of a simple setup configuration.



**Figure 6a Example of Setup Configuration Using Remote Monitor**

2. Disconnect the video connection at the main monitor to avoid double termination and possible picture degradation.
3. Adjust the camera angle to obtain the required view.
4. Disconnect the setup coax and connect the coax video cable to the main monitor at the viewing station. See **Figure 6b** for an example of a permanent configuration.



**Figure 6b Example of Permanent Configuration**

## 5 Camera and Lens Settings

### 5.1 Line Lock / Phase / Backlight Compensation Settings

As received, the unit will be set such that the line lock is on, the backlight compensation is off, and the white balance is on.

See Detail for Camera Module Adjustments and Connections

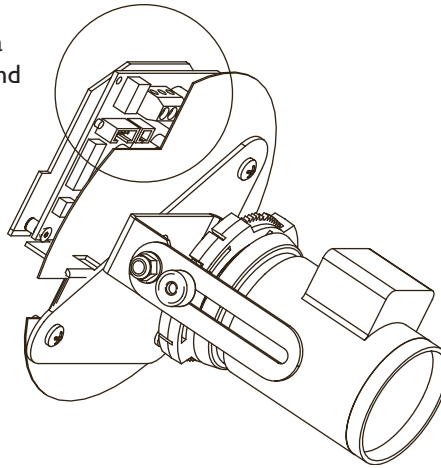
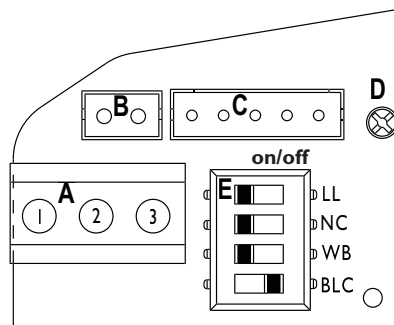


Figure 7 Camera Assembly



#### CAMERA MODULE ADJUSTMENTS AND CONNECTIONS

##### A - Power Block

1. Supply
2. Secondary GND (Do not connect)
3. Supply

(Supply accepts 24 Vac or 12 Vdc, polarity independent, galvanically isolated from video GND)

##### B - Video Cable Output Connection

##### C - DC Iris Cable Connection

##### D - Vphase Adjustment

Adjust control until desired setting is achieved.

##### E - Default Dipswitch Settings

- On - LL (Line Lock)
- NC (Not Connected)
- On - WB (White Balance)
- Off - BLC (Back Light Compensation)

#### Detail A: Adjustments and Connections

#### TECH TIP

At longer focal length settings, mainly close to 50 mm, the dome can effect the focus. To adjust for this, simply move the focus ring of the lens slightly out-of-focus toward the **N** side. Temporarily place dome on the unit and observe the focus of the picture. Repeat this process until camera is focused properly.

## 6 SPARE PARTS/ACCESSORIES

### Spare Parts

Description	Part No.
Dome/Trim Ring	315 3741 001
Inner Liner	315 3741 002
Pendant Cap	315 3741 003
Mounting Clamps/Screws (3 sets)	315 3741 004
Lens - 3-8 mm DC Iris	LEN 3.08.0AI-T
Lens - 5-50 mm DC Iris	LEN 5.050AI-T

### Accessories

Description	Part No.
Conduit Adapter for 1-inch Conduit	315 3741 005
Plenum Rated Backbox	IND5ABX
Plenum Rated Backbox and Support Rails	IND5ABXR
Wall Mount	IND5AMT



mechtronics

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