



# EX80/EX82-IP Infrared Imager

EX80/EX82-IP



**BOSCH**

en Installation Manual



## Important safety instructions

Type numbers: NEI-808V04-11, NEI-809V04-11, NEI-808V04-21, NEI-809V04-21  
NEI-828V04-11, NEI-829V04-11, NEI-828V04-21, NEI-829V04-21, NEI-828V09-11  
NEI-829V09-11 | NEI-828V09-21 | NEI-829V09-21

Read, follow, and retain all of the following safety instructions. Heed all warnings on the unit and in the operating instructions.

1. **Cleaning - Unpower the unit before cleaning.** Follow any instructions provided with the unit. Generally, using a dry cloth for cleaning is sufficient, but a moist fluff-free cloth or leather shammy may also be used. Do not use liquid cleaners or aerosol cleaners.
2. **Heat Sources - Do not install the unit near any heat sources** such as radiators, heaters, stoves, or other equipment (including amplifiers) that produce heat.
3. **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 electrical shock. Never spill liquid of any kind on the unit. Do not place objects filled with liquids, such as vases or cups, on the unit.
4. **Controls adjustment - Adjust only those controls specified in the operating instructions.** Improper adjustment of other controls may cause damage to the unit. Use of controls or adjustments, or performance of procedures other than those specified, may result in hazardous radiation exposure.
5. **Overloading - Do not overload outlets and extension cords.** This can cause fire or electrical shock.
6. **Power sources - Operate the unit only from the type of power source indicated on the label.** Before proceeding, be sure to disconnect the power from the cable to be installed into the unit.
  - For external power supplied units, use only the recommended or approved power supplies.
  - For limited power source units, this power source must comply with *EN60950*. Substitutions may damage the unit or cause fire or shock.
  - For 24 VAC units, voltage applied to the unit's power input should not exceed 24 VAC. User-supplied wiring must comply with local electrical codes (Class 2 power levels). Do not ground the supply at the terminals or at the unit's power supply terminals.
  - If unsure of the type of power supply to use, contact your dealer or local power company.
7. **Damage requiring service - Unplug the unit from the main AC power source and refer servicing to qualified service personnel when any damage to the equipment has occurred, such as:**
  - the power supply cord or plug is damaged;
  - liquid has been spilled in or on the equipment;

- an object has fallen into the unit;
  - unit has been dropped or the unit cabinet is damaged;
  - unit exhibits a distinct change in performance;
  - unit does not operate normally when the user correctly follows the operating instructions.
8. Safety check - Safety checks should be performed upon completion of service or repairs to the unit to ensure proper operating condition.
  9. Installation - Install in accordance with the manufacturer's instructions and in accordance with applicable local codes.
  10. Attachments, changes, or modifications - Only use attachments/accessories specified by the manufacturer. Any change or modification of the equipment, not expressly approved by Bosch, could void the warranty or, in the case of an authorization agreement, authority to operate the equipment.



**DANGER!** High risk: This symbol indicates an imminently hazardous situation such as " Dangerous Voltage " inside the product. If not avoided, this will result in an electrical shock, serious bodily injury, or death.



**CAUTION!** Alerts the user to the risk of damage to the unit



**WARNING!** Medium risk: Indicates a potentially hazardous situation. If not avoided, this may result in minor or moderate injury. Alerts the user to important instructions accompanying the unit.



**NOTE!** This symbol indicates information or a company policy that relates directly or indirectly to the safety of personnel or protection of property.

The full version Installation Manual is available on the enclosed CD-ROM and can be viewed and printed out with Acrobat Reader, which is also on the enclosed CD-ROM. This user guide is the intellectual property of BOSCH Security Systems and is protected by copyright

### CAUTION!



- **Camera Grounding** - For mounting the camera in potentially damp environments, ensure to ground the system using the ground connection of the power supply connector (see section: Connecting external power supply).
- **U.S.A. models only** - *Section 810 of the National Electrical Code, ANSI/NFPA No. 70*, provides information regarding 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.
- **Permanently connected equipment** - Incorporate a readily accessible disconnect device in the building installation wiring.
- **Power lines** - Do not locate the camera near overhead power lines, power circuits, or electrical lights, nor where it may contact such power lines, circuits, or lights.

## 1.1 Unpacking

### **Parts list** (items supplied with unit)

- EX80/82IP Infrared Imager™ Assembly
- Installation Instructions booklet
- Allen Key
- EXMB028B or EXMB028W cable management mounting bracket
- Extra window (wide illumination beam) for 4-9mm version only
- Software CD

### **Items required for installation**

(not supplied with units)

- Mounting hardware
- Mounting tools
- PC/Laptop with RJ45 Ethernet port
- Power supply

## 1.2 Initial Preparations

- 1.) Determine the operating voltage at the installation site. The camera's Voltage Regulator Board accepts 12-24VAC / VDC input without change to internal connections.
- 2.) Determine the optimum mounting location for the camera. See *Section 2, Camera Mounting*.
- 3.) All cameras have been tested and pre-focused with telephoto setting as factory default prior to shipment. If any adjustment needed, it is advisable to check the camera's operation before installation
- 4.) Install IP Camera Software on PC.

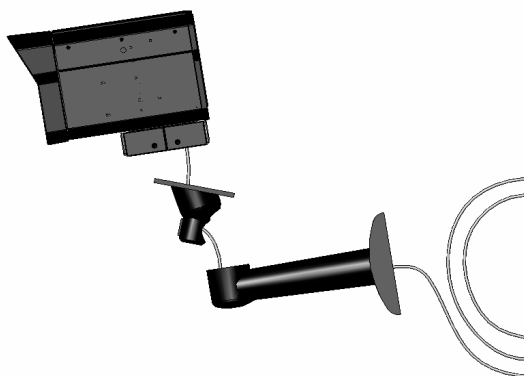
## 2. Mounting the unit

### 2.1 Mounting bracket preparation



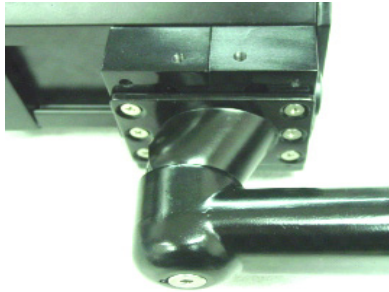
- 1.) Use the supplied Allen Key to remove the setscrew from the supplied mounting bracket.
- 2.) Separate the two sections of the mounting bracket.

### 2.2 Cable / Bracket insertion



- 1.) Carefully feed the Power and Ethernet cables through both sections of the mounting bracket.
- 2.) Make sure the cables are not kinked, chafed, or split during this procedure.

## 2.3 Mounting bracket attachment



- 1.) Attach the Mounting Bracket to the Camera's Mounting Block using the six bolts supplied with the bracket
- 2.) Snug the two halves of the bracket together with the Allen head set screw
- 3.) Tighten the setscrew enough so that the camera can be adjusted for angle. Do not over-tighten.
- 4.) Note the angled part of the mounting bracket faces to the rear of the camera

## 2.4 Camera: Mounting and setup:

Select a suitable location that protects the camera from accidental damage, tampering and environmental conditions exceeding the specifications of the camera to be mounted.



**CAUTION!** Ensure the selected location is protected from falling objects, accidental contact with moving objects and unintentional interference from personnel. Follow all applicable building codes.

### **These mounting guidelines should be followed:**

- 1.) Locate the bracket such that it cannot be easily interfered with, either intentionally or accidentally.
- 2.) Select a smooth, flat mounting surface to ensure proper sealing. The surface must also be capable of supporting the combined weight of the camera and mounting hardware under all expected conditions of vibration and temperature. Camera performs best mounted 3-6m off the ground.
- 3.) Secure all cabling.



### Camera Setup:

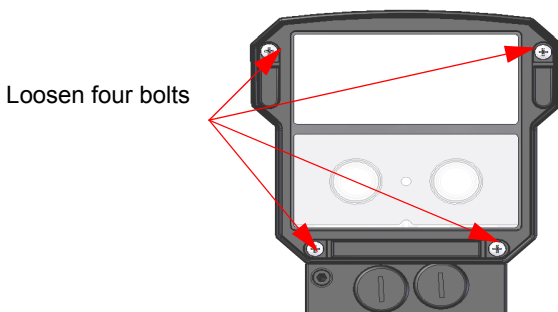
To determine if the camera is receiving a picture:

- 1.) Make sure the supplied software is installed in your PC/laptop computer (For Camera Configuration and Software Viewing Setup, refer to full version Installation Manual available on the enclosed CD-ROM -Section 4).
- 2.) Connect the camera to the PC/laptop and power up the camera. Follow the prompts. See section 2 of full version Installation Manual available on the enclosed CD-ROM for more detail.
- 3.) Launch Configuration Manager or web-browser. Refer to Configuration Manager User Manual for information. Refer to section 4 of full version Installation Manual available on the enclosed CD-ROM for more detail on camera configuration via web browser.

## 2. 5 Camera lens adjustments and window selection

For optimum picture quality, the camera lens should be as close as possible to the inside face of the viewing window, without touching. For focus adjustment follow the steps below.

- 1.) Loosen the four bolts from the extrusion
- 2.) Remove the faceplate, window and the lens foam, set aside. Make sure the photocell is not dislodged.
- 3.) Perform the proper lens adjustments as per section **2.6**

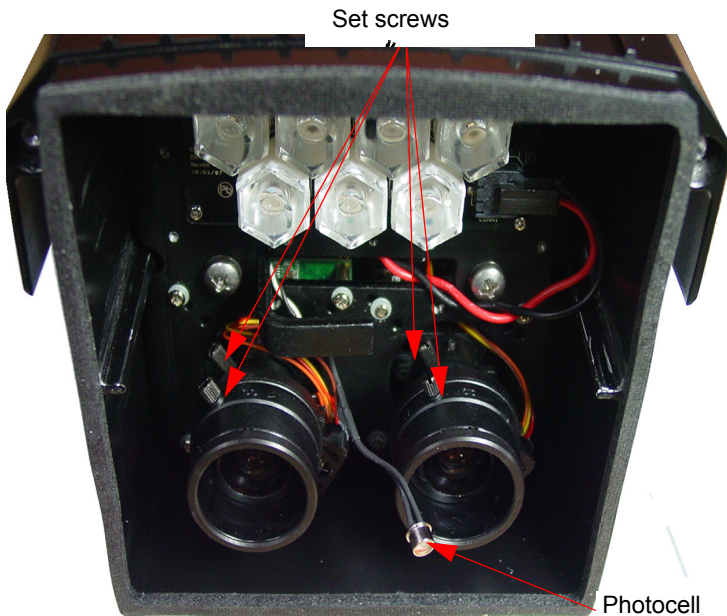


## 2.6. Vari-focal and “auto iris” control adjustment



**Note:** Use Infra-Red Pass filter to cover the lens during focusing to simulate low light conditions on scene for correct 24-hour focusing. For camera with manual iris lens, the camera should be focused with the lens iris fully opened to simulate the worst possible depth of field. Using a Infra-Red Pass filter will ensure the iris is fully open for correct setup and adjustment.

Note that statement above is applicable only for Day/Night or IR version cameras.



- 1.) Loosen the lens set screws for focus/zoom adjustments
- 2.) The setscrew marked **N**  $\longleftrightarrow \infty$  is used for image focus
- 3.) The setscrew marked **T**  $\longleftrightarrow$  **W** is used for telephoto or wide-angle settings.
- 4.) Re-tighten the setscrews after focus adjustments have been completed.



**CAUTION!** The CCD image sensors are highly sensitive and require special care for proper performance and extended lifetime. Do not expose them to direct sunlight or bright spot lights in operating and non-operating conditions.

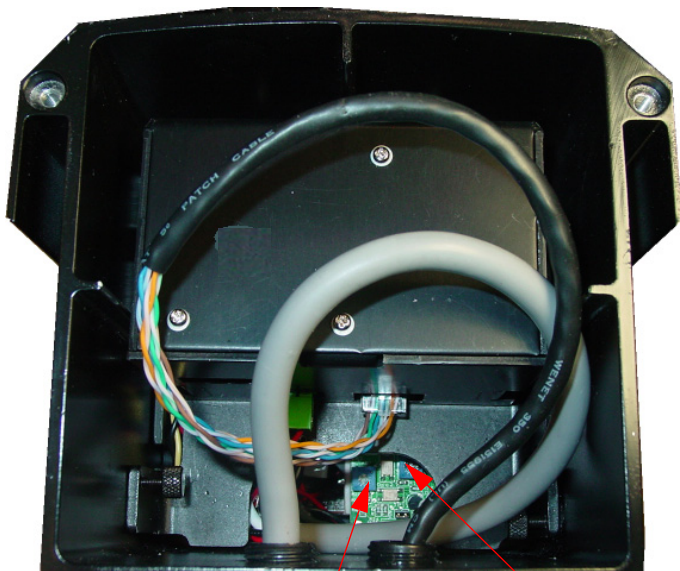
## 2.7 Window Selection

	Recommended focal length [mm]	Recommended HFOV @ 100ft / 30m distance [ft / m]
Narrow Window	18-50mm	28ft / 8m and narrower
Wide Window	5-18mm	Wider than 18ft / 8m

## 2.8 LED array- power adjustments

If adjustment is needed, the following procedure must be followed:

- 1) Remove the rear cover of the camera. Set cover aside.



Photocell  
Adjustment Pot

IR Adjustment  
Pot

The **EX80/82IP** needs to be powered-up while making the LED power adjustments. Cover the photocell to turn the LEDs “ON” (850nm LEDs will have a slight red glow). Adjust the **LED** power if they are too bright or too dim. For **IR** power adjustment, rotate **VR1**. Clockwise is high and counter-clockwise is low

## 2.9 Photocell Adjustment

The photocell is factory set optimum level. In some conditions such as with bright foreground objects the camera may switch too early or too late. For photocell “On/Off” light-level adjustment, rotate **IR Adjustment Pot**. Clockwise is off and counter-clockwise is on.

Re-assemble the IP board into the chassis and carefully attach the rear cover.

## 2.10 Camera re-assembly

Make sure all wires are properly connected, all holes are sealed against moisture penetration, and all mounting screws are tight.

- 1.) Position the photocell properly in the small hole of the window foam.
- 2.) Slide the lens foam over the camera lens. Make sure the foam is snug and as close to the faceplate viewing window as possible and the photocell is secure with an unobstructed view.
- 3.) Attach the window, faceplate, and the rear cover to the camera housing. Tighten the four bolts.
- 4.) Tighten the camera’s adjustable mounting bracket after the desired viewing angle has been determined.
- 5.) Power-up the camera and check its operation.



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