



UHI-SBG-0 Indoor Housing






BOSCH


Important Safeguards


1. **Read, Follow, and Retain Instructions** - All safety and operating instructions should be read and followed before operating the unit. Retain instructions for future reference.
2. **Heed Warnings** - Adhere to all warnings on the unit and in the operating instructions.
3. **Attachments** - Attachments not recommended by the product manufacturer should not be used, as they may cause hazards.
4. **Installation Cautions** - 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 manufacturer-recommended accessories, or those sold with the product. Mount the unit per the manufacturer's instructions. Appliance and cart combination should be moved with care. Quick stops, excessive force, or uneven surfaces may cause the appliance and cart combination to overturn.
5. **Cleaning** - Unplug the unit from the outlet before cleaning. Follow any instructions provided with the unit. Generally, using a damp cloth for cleaning is sufficient. Do not use liquid cleaners or aerosol cleaners.
6. **Servicing** - Do not attempt to service this unit yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
7. **Damage Requiring Service** - Unplug the unit from the main AC power source and refer servicing to qualified service personnel under the following conditions:
 - When the power supply cord or plug is damaged.
 - If liquid has been spilled or an object has fallen into the unit.
 - If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
 - If the unit does not operate normally, when following the operating instructions. Adjust only those controls specified in the operating instructions. Improper adjustment of other controls may result in damage, and require extensive work by a qualified technician to restore the unit to normal operation.
 - If the unit has been dropped or the cabinet damaged.
 - If the unit exhibits a distinct change in performance, this indicates that service is needed.
8. **Replacement Parts** - When replacement parts are required, the service technician should use replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electrical shock or other hazards.
9. **Safety Check** - Upon completion of servicing or repairs to the unit, ask the service technician to perform safety checks to ensure proper operating condition.
10. **Power Sources** - Operate the unit only from the type of power source indicated on the label. If unsure of the type of power supply to use, contact your dealer or local power company.
 - For units intended to operate from battery power, refer to the operating instructions.
 - For units intended to operate with External Power Supplies, use only the recommended approved power supplies.
 - For units intended to operate with a limited power source, this power source must comply with EN60950. Substitutions may damage the unit or cause fire or shock.
 - For units intended to operate at 24VAC, normal input voltage is 24VAC. Voltage applied to the unit's power input should not exceed 30VAC.
 User-supplied wiring, from the 24VAC supply to unit, must be in compliance with electrical codes (Class 2 power levels). Do not ground the 24VAC supply at the terminals or at the unit's power supply terminals.
11. **Coax Grounding** - If an outside cable system is connected to the unit, ensure that the cable system is grounded. 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.
12. **Grounding** - This unit may be equipped with a 3-wire grounding plug (a plug with a third pin, for grounding). This safety feature allows the plug to fit into a grounding power outlet only. If unable to insert the plug into the outlet, contact an electrician to arrange replacement of the obsolete outlet. Do not defeat the safety purpose of the grounding plug.
 - Outdoor equipment should only be connected to the unit's inputs after this unit has had its grounding plug connected to a grounded outlet or its ground terminal properly connected to a ground source.
 - The unit's input connectors must be disconnected from outdoor equipment before disconnecting the grounding plug or grounding terminal.
 - Proper safety precautions such as grounding should be followed for any outdoor device connected to this unit.
13. **Lightning** - For added protection during a lightning storm, or when this unit is left unattended and unused for long periods of time, unplug the unit from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power line surges.


Safety Precautions


	CAUTION RISK OF ELECTRIC SHOCK. DO NOT OPEN!	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

	This symbol indicates the presence of uninsulated "dangerous voltage" within the product's enclosure that can cause an electric shock.
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	This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
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	Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.
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	Power Disconnect. An appropriate disconnect device shall be provided as part of the building installation.
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	Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electrical tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.
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Preface

This guide describes how to install the UHI-SBG-0 Series.

Audience

This guide is intended for qualified installation and service personnel who are familiar with the applicable national and local electrical codes.

Document Conventions

Convention	Meaning
Bold	Denotes a part, item, or assembly.
<i>Italic</i>	Denotes a reference to another paragraph, figure or table.
<u>Underline</u>	Used to emphasize a point.
<code>courier</code>	Denotes the actual name of an object, the exact code that should be typed or a message returned from a system.

Symbols

You may encounter these symbols within the document. Explanatory text accompanies each symbol, which provides additional information detailing the operation or highlighting safety information.



NOTICE! Notices inform you of essential but non-critical information. Read these messages carefully as any directions or instructions contained therein can help you avoid making mistakes.



WARNING! Warnings highlight information, that if overlooked may cause damage to the system or result in personal injury. Take warnings seriously.

Customer Support and Service

If this unit needs service, contact the nearest Bosch Security Systems Service Center for authorization to return and shipping instructions.

Service Centers

USA

Phone: 800-366-2283 or 585-340-4162

Fax: 800-366-1329

Email: cctv.repair@us.bosch.com

CCTV Spare Parts

Phone: 800-894-5215 or 408-957-3065

Fax: 408-935-5938

Email: BoschCCTVparts@ca.slr.com

Canada

Phone: 514-738-2434

Fax: 514-738-8480

Europe, Middle East & Asia Pacific Region

Phone: 44 (0) 1495 274558

Fax: 44 (0) 1495 274280

Email: rmahelpdesk@solectron.com

For additional information, see www.boschsecurity.com

Related Publications

Refer to the latest Bosch Security Systems, Inc. Databook for the most up-to-date datasheets. To obtain a copy of the Databook, please contact your local Bosch representative.

You can also visit the Bosch Security Systems World Wide Web site at: <http://www.boschsecurity.com> to view a current listings of our publications.

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1 Unpacking

This equipment should be unpacked and handled with care. If an item appears to have been damaged in shipment, notify the shipper immediately.

Verify that all the parts listed in the Parts List below are included. If any items are missing, notify your Bosch Security Systems Sales or Customer Service Representative.

The original packing carton is the safest container in which to transport the unit and must be used if returning the unit for service. Save it for possible future use.

1.1 Parts List

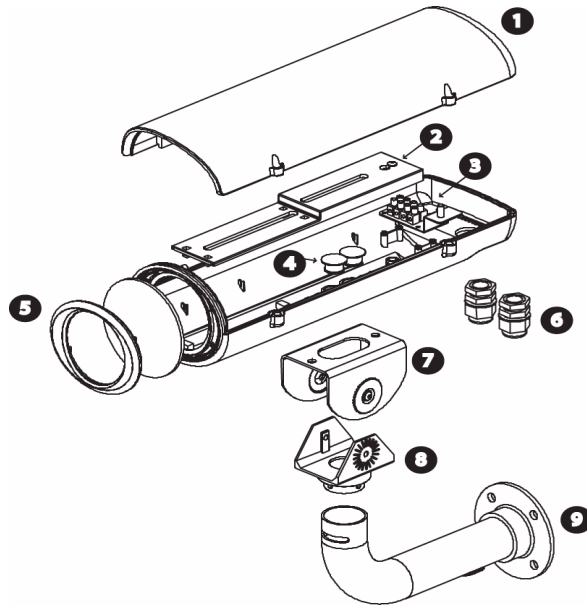
The following table lists the parts included:

Quantity	Part
1	Housing
1	Bracket
1	Installation manual
1	Bag of accessories
1	Wrench 3 mm HEX
1	Wrench tamperproof M3.5 T20
2	SCR 1/4 in. 20 x 5/8 in. N(+) SS
2	SCR 1/4 in. 20 x 1/2 in. N(+) SS
2	SCR 1/4 in. 20 x 3/8 in. N(+) SS
2	1/4 in. Washers
1	4 mm Spacer
1	9 mm Spacer
2	Rubber washers PG 3/8 in.
2	Rubber washers PG 1/2 in.
2	NPT fittings 3/8 in. NPT UL/CE
2	NPT fittings 1/2 in. NPT UL/CE

1.2 Tools Required

- Small flat blade screwdriver
- Phillips screwdriver (#1 and #2)
- Adjustable wrench
- Wire cutter/stripper/crimper tool

2 Exploded View



Reference	Part
1	Top cover
2	Camera tray
3	Connector block
4	Plugs
5	Front window holder
6	NPT fittings
7	Adjustable head
8	Mount head
9	J-mount base

3 Description

The UHI-SBG-0 Series is an indoor housing which meets customer demand for appearance, cost competitiveness, and easy installation. Removal of two tamper-resistant screws is all that is necessary to open the cover and access the camera and lens in its mounted position. Power and video cabling can be routed through liquid tight fittings in the rear or bottom of the housing.

Camera Ratings	
Ambient temperature ¹	0°C (32°F) - 50°C (122°F)
Power consumption	max. 10 W
Voltage	100 - 240 VAC or for low voltage models 12 - 28 VAC / 12 - 30 VDC
Weight camera without lens	0.45 kg (1 lb)
Weight lens max	1 kg (2.2 lb)
Temperature operating conditions	-20°C (-4°F) to 50°C (122°F)
Approvals	UL, cUL, CE, VDE, CSA

1. Maximum recommended ambient temperature camera enclosures: 50°C (122°F) with a de-rating of 0.8 °C (1.4°F) per Watt of the rated power consumption of the camera and lens installed inside.

4 Cable Requirements

The specifications for the UHI-SBG-0 Series may vary depending on the model that you are operating. Refer to the following tables for more information.

Video Transmission (coaxial)

Type	Specification
Cable Type	RG-59/U for runs < 300 m (1000 ft) RG-11/U for runs < 600 m (2000 ft)
Cable Size	Outside diameter between 4.6 mm (0.181 in.) -7.9 mm (0.312 in.)
Cable Shape	Round
Shield	> 93% Braided copper shield
Center Conductor	Stranded copper center
DC Resistance	< 15 Ohm/1000 (RG-59/U) < 6 Ohm/1000 (RG-11/U)
Cable Impedance	75 Ohm
Agency Rating	UL
Environmental	Outdoor rated
Temperature Rating	> 80°C
Sources	Belden 9259 H05RN-F 3 G 1.00

Input Power Cord - North American

Type	Specification
Cable Type	Rated
Cable Size	Outside diameter between 4.6 mm (0.18 in.) -7.9 mm (0.31 in.)
Cable Shape	Round
Conductors	3-conductor version
Agency Rating	UL/C.S.A., UL VW-1
Environmental	Outdoor rated
Temperature Rating	105°C
Voltage Rating	300 V

Input Power Cord - European

Type	Specification
Cable Type	H05RN-F 3 G 0.75 and H05RN-F 3 G 1.00
Cable Size	Outside diameter between 4.6 mm (0.18 in.) -7.9 mm (0.31 in.)
Cable Shape	Round
Conductors	3-Conductor version
Agency Rating	VDE
Environmental	Outdoor rated

5 Installing the Housing

This chapter outlines the procedures needed to install the UHI-SBG-0 Indoor Housing Series. Installation should be made by a qualified service person and all local codes should be conformed to.

5.1 Opening the Cover

The UHI-SBG-0 housing is secured with two (2) tamper-resistant screws. To open the cover, use the supplied tamper-resistant wrench to remove the screws.

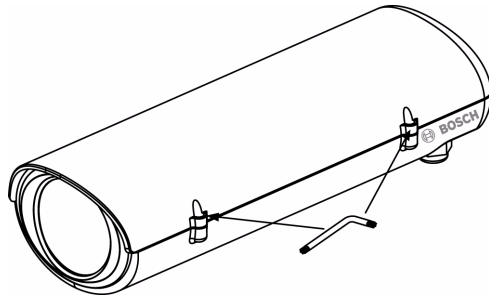


Fig. 5.1 Opening the Cover

5.2 Feed-through Wiring

The UHI-SBG-0 features feed-through wiring holes which are used to feed the cabling through. Prior to mounting the camera, remove the rear (2) or bottom (2) rubber dome plugs and install the NPT fittings (see *Section 5.3: NPT Fittings*).

5.3 NPT Fittings

The NPT fittings ensure a tight seal. Depending on how the UHI-SBG-0 is mounted, the NPT fittings can be installed either in the rear or from the bottom of the housing. The supplied 3/8 in. NPT fittings accept a round cable with diameters from 4.3 mm (0.17 in.) to 11.4 mm (0.45 in.). The two larger 1/2 in. NPT fittings accept cables with diameters from 6.5 mm (0.26 in.) to 10.5 mm (0.42 in.).

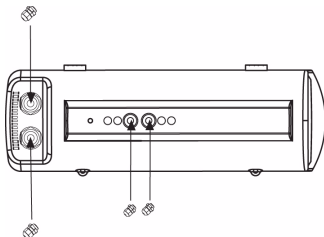


Fig. 5.2 Installing the NPT Fittings

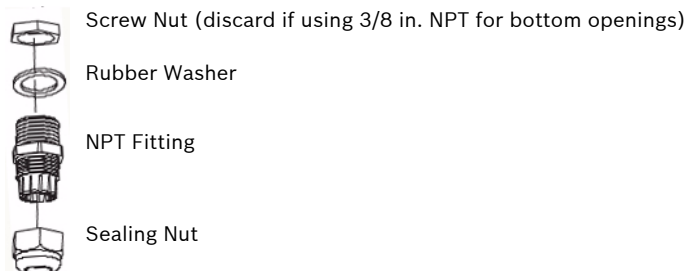


Fig. 5.3 NPT Exploded View

Installing the NPT Fittings

1. Determine to use either the rear or bottom gland holes and remove the (2) rubber hole plugs.
2. Remove the screw inside the housing that holds the camera tray. Set screw aside.
3. Unlock and remove the tray by sliding it toward the rear of the housing. Set tray aside.
4. Attach the two (2) 1/2 in. NPT fittings with the rubber washer on the outside of the housing directly to the rear hole openings (see *Figure 5.4* on page 6).

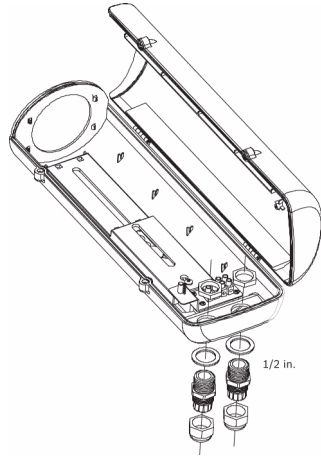


Fig. 5.4 Attaching the 1/2 in. NPT Fittings

- or -

Attach the two (2) 3/8 in. NPT fittings (discard the screw nut) with the rubber washer on the outside of the housing directly to the bottom openings (see *Figure 5.5* on page 6).

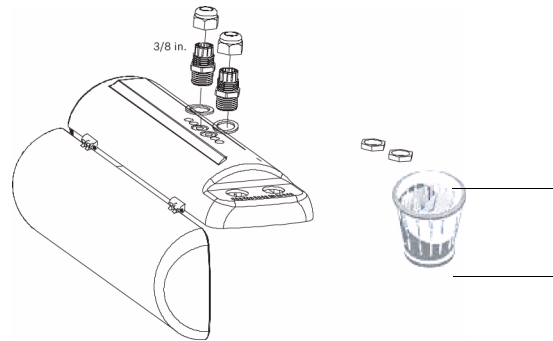


Fig. 5.5 Attaching the 3/8 in. NPT Fittings

5. Cover any unused holes with the provided dome plugs supplied with the housing.



NOTE! Tighten all fittings to ensure a secure liquid-tight seal. Failure to do so could allow moisture to enter the housing and damage the camera and lens. If a sealant is used, be sure it is a neutral cure type. Sealants that release acetic acid may harm camera electronics. Use of drip loops is recommended on the wiring outside of the rear end cap.

5.4 Wire Preparation

Supply the UHI-SBG-0 with power by using a power cord that complies with the Nec 400-4 CEC rule 4-010 and is marked with INDOOR, W or W-A. For 24 V cameras, use the recommended maximum cable length chart for selecting the proper wire size.

Wire Size mm ²	Wire Size AWG	Housing Distance
0.5	20	27 m (90 ft)
1	18	42 m (140 ft)
1.5	16	67 m (220 ft)
2.5	14	108 m (355 ft)
4	12	172 m (565 ft)

Table 5.1 Maximum cable lengths for 24 V camera housings

Preparing the Power Supply

Cut the power cord on 120 VAC and 230 VAC camera models; leave enough cable to allow a connection to the terminal block. Strip no less than 6 mm (0.25 in.) and no more than 8 mm (0.31 in.) of insulation away from the wire. Do not nick the wires.

Preparing the Terminal Block

Wire sizes larger than 2.5 mm² (14 AWG) require a splice to accommodate the terminal block. The terminal block accepts wires ranging from 0.5 to 2.5 mm² (20 to 14 AWG). When using larger wire sizes, splice to a smaller size wire at the terminal block end. The splice may need to be enclosed in a junction box if it does not pass through the fittings.

WIRING DIAGRAM

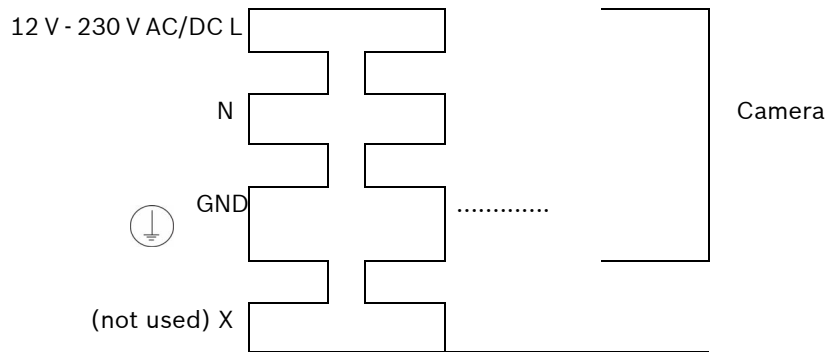


Fig. 5.6 Terminal Wiring



WARNING! External interconnecting cables are to be installed in accordance to NEC, ANSI/NFPA70 (for US application) and Canadian Electrical Code, Part I, CSA C22.1 (for CAN application) and in accordance to local country codes for all other countries.

Branch circuit protection incorporating a 20 A, 2-pole Listed Circuit Breaker or Branch Rated Fuses are required as part of the building installation. A readily accessible 2-pole disconnect device with a contact separation of at least 3 mm must be incorporated.

5.5 Attaching the Camera and Spacer to the Tray

The UHI-SBG-0 includes two (2) spacers which may be required to keep the camera level (see *Figure 5.7* on page 8). If a spacer is not used, the camera may dip down creating a port hole effect.

Camera and Spacer Installation

1. Attach the lens to the camera.
2. Tentatively place the camera tray inside the housing. Do not secure.
3. Determine if one of the supplied spacers are required and place on top of the lower portion of the tray as seen in *Figure 5.7* on page 8.
4. Place the camera in the up-right position inside the housing with the lens approximately 1/8 in. away from the housing window (lens should not touch window).

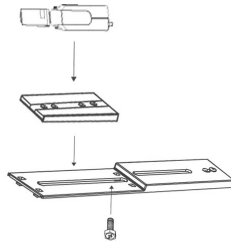


Fig. 5.7 Attaching the Camera and Spacer to the Tray

5. Hold all three (3) components in place (tray, spacer, and camera) and remove from housing. Turn components over and secure with 1/4-20 x 5/8 in. screw and large flat washer.
6. Set aside.

6 Mounting the Housing

The UHI-SBG-0 housing includes a J-mount which features a removable camera bracket and locking grooves to keep the housing from drooping. The mount is vertically adjustable by pushing the housing up or down.

Mounting Procedure

1. Determine a proper location for the housing.
2. Insert the coax and power lead wires from the wall through the supplied J-mount allowing enough slack to pull through the housing (see *Figure 6.1* on page 9 if using the bottom glands or see *Figure 6.2* on page 9 if using the rear glands).

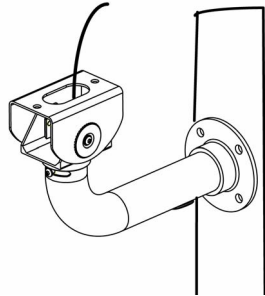


Fig. 6.1 Feeding the Wire using the Bottom NPT Fittings

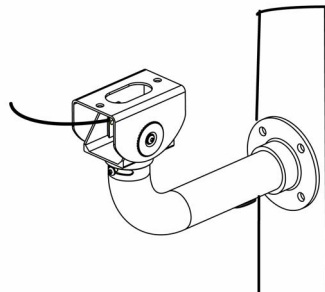


Fig. 6.2 Feeding the Wire using the Rear NPT Fittings

3. Prepare the surface for mounting and install the J-mount.

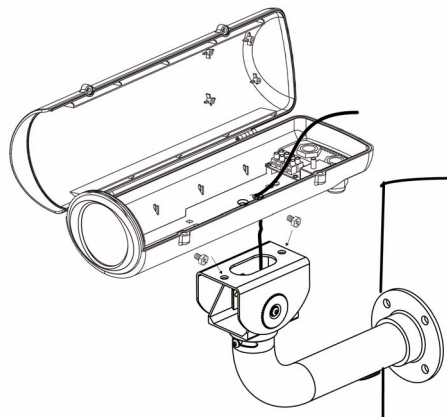


Fig. 6.3 Mounting the J-mount and Housing

4. Place the UHI-SBG-0 housing on top of the J-mount while feeding the wires through the bottom or rear NPT fittings.
5. Make sure that the weight of the camera is distributed evenly.

6. Secure the housing to the mount by attaching two 1/4-20 x 0.50 in. screws and two 1/4 in. washers. The washers must be used for the screws to thread properly.



NOTE! The outermost set of 1/4-20 threaded holes are for mounting to feed-through mounts and the innermost 1/4-20 holes are for mounting to all other mounts and pan/tilts (see Figure 1). For mounting to all other mounts and pan/tilts, refer to the specific device's installation guide.

6.1 Installing the Camera Tray

Verify operation of the camera and lens and adjust the camera focus and iris as necessary. See the instruction manual for your specific camera.

Installing the Camera Tray

1. Slide the camera tray with attached camera (see *Section 5.5: Attaching the Camera and Spacer to the Tray*) into the slot of the housing.
2. Secure the camera tray with screw.

6.2 Connecting the Wires

Before proceeding, verify that the BNC for the Video Coax Cable is separated from the mains power connections / circuitry and there is a physical spacing barrier between cables. For wiring video coax connections, use only the cables specified in *Section 4: Cable Requirements*.

Connecting the Wires

1. Attach the BNC connector to the coax.
2. Connect the coax cable to the camera.
3. Connect the power leads from the source to the terminated block.
4. Connect the wires from the terminal block to the camera.
5. Tighten the fittings to 8.5 N.m to 9.0 N.m (75 in. lb to 80 in. lb). The torque rating is approximately 1 to 1-1/2 turns past the point where the fitting starts to grip the wire.
 - Tighten all fittings to ensure a liquid-tight seal. Failure to do so could allow moisture to enter the housing and damage electronic parts, camera, and lens.
 - If a sealant is used, be sure it is a neutral cure type. Sealants that release acetic acid may harm camera electronics.
 - Use of drip loops is recommended on the wiring outside of the rear end cap.
6. Use the provided hole plugs to plug any unused holes.
7. Close the cover and secure the tamper-resistant screws with the supplied wrench.

7 Operation

These housings require no operational adjustments other than camera/lens adjustments.

8 Maintenance

No special maintenance is required other than occasional cleaning of the window. The window can be cleaned with water or any non aggressive liquid. Regularly scheduled maintenance will help prolong the operation life of this unit. Clean the viewing window as needed with a mild, nonabrasive detergent in water and a soft cloth.

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