



BOSCH

IR Illuminator 5000

IIR-50850 | IIR-50940 | NIR-50850 | NIR-50940



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Installation note

1

Safety

Safety message explanation

**Caution!**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Safety precautions

**Caution!**

Installation should only be performed by qualified service personnel in accordance with the National Electrical Code (NEC 800 CEC Section 60) or applicable local codes.

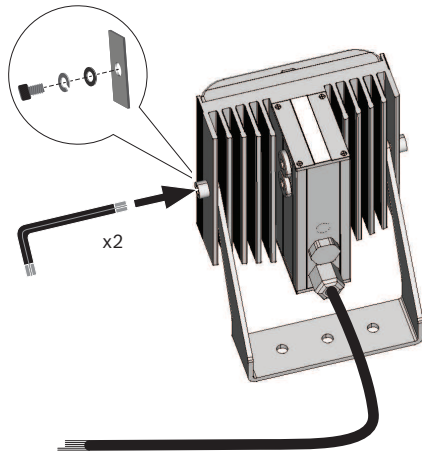
Important safety instructions

Read, follow, and retain for future reference all of the following safety instructions. Follow all warnings before operating the device.

- Clean only with a dry cloth. Do not use liquid cleaners or aerosol cleaners.
- Take precautions to protect the device from power and lightning surges.
- Operate the device only from the type of power source indicated on the label.
- Unless qualified, do not attempt to service a damaged device yourself. Refer all servicing to qualified service personnel.
- Disconnect power supply and arrange for the device to be serviced by qualified personnel if:
 - The power cable/plug is damaged.
 - Liquids or foreign bodies have entered the device.
 - The device has been exposed to water or extreme environmental conditions.
 - The device is faulty despite correct installation/operation.
 - The device has fallen from a height, or the housing has been damaged.
 - The device performance is noticeably changed.

2 Installation

Mounting the bracket



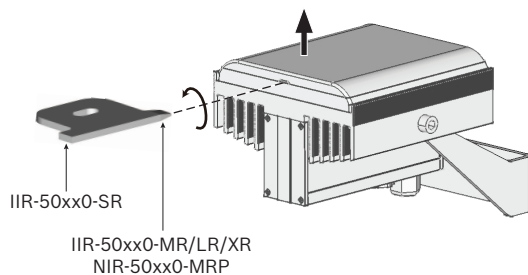
Connect the bracket to the illuminator as follows:

1. Ensure that the parts are mounted in the following order:
 - Socket head screw
 - Lock washer
 - Washer
 - Illuminator
 - Bracket
2. Use the supplied socket wrench to secure the bracket on both sides of the illuminator.

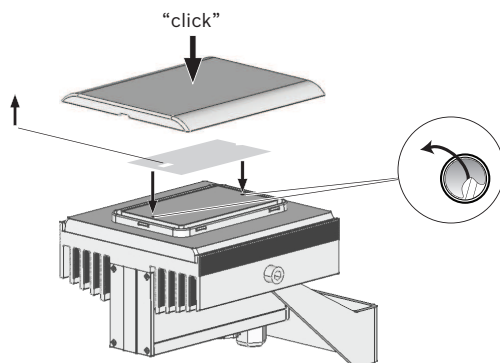
Changing the beam-angle filter

Insert a beam-angle filter as follows:

1. Insert the supplied tool into the slot and twist. (Use the thick end for the IIR-50xxx0-SR illuminator; use the tapered end for all other illuminators.)



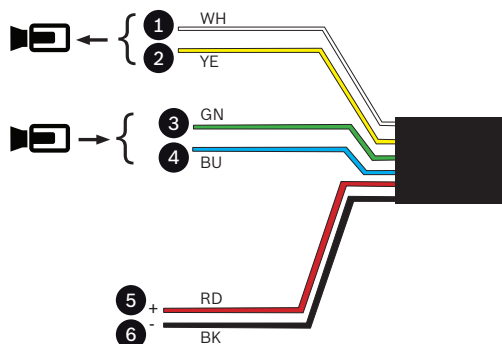
2. Remove the top cover.
3. Peel back the protective foil from the adhesive points.
4. Attach the selected beam-angle filter with the label side up to the adhesive points.



5. Click the top cover back into place.

3 Connection

3.1 Connecting the IIR-50xx0



Power

- To power the illuminator, connect a 12 to 32 VDC or a 24 VAC supply from a SELV class 2 power supply to wires 5 (+ red) and 6 (- black).



Notice!

Make sure the unused wires are not connected to each other.

Illuminator masters the camera

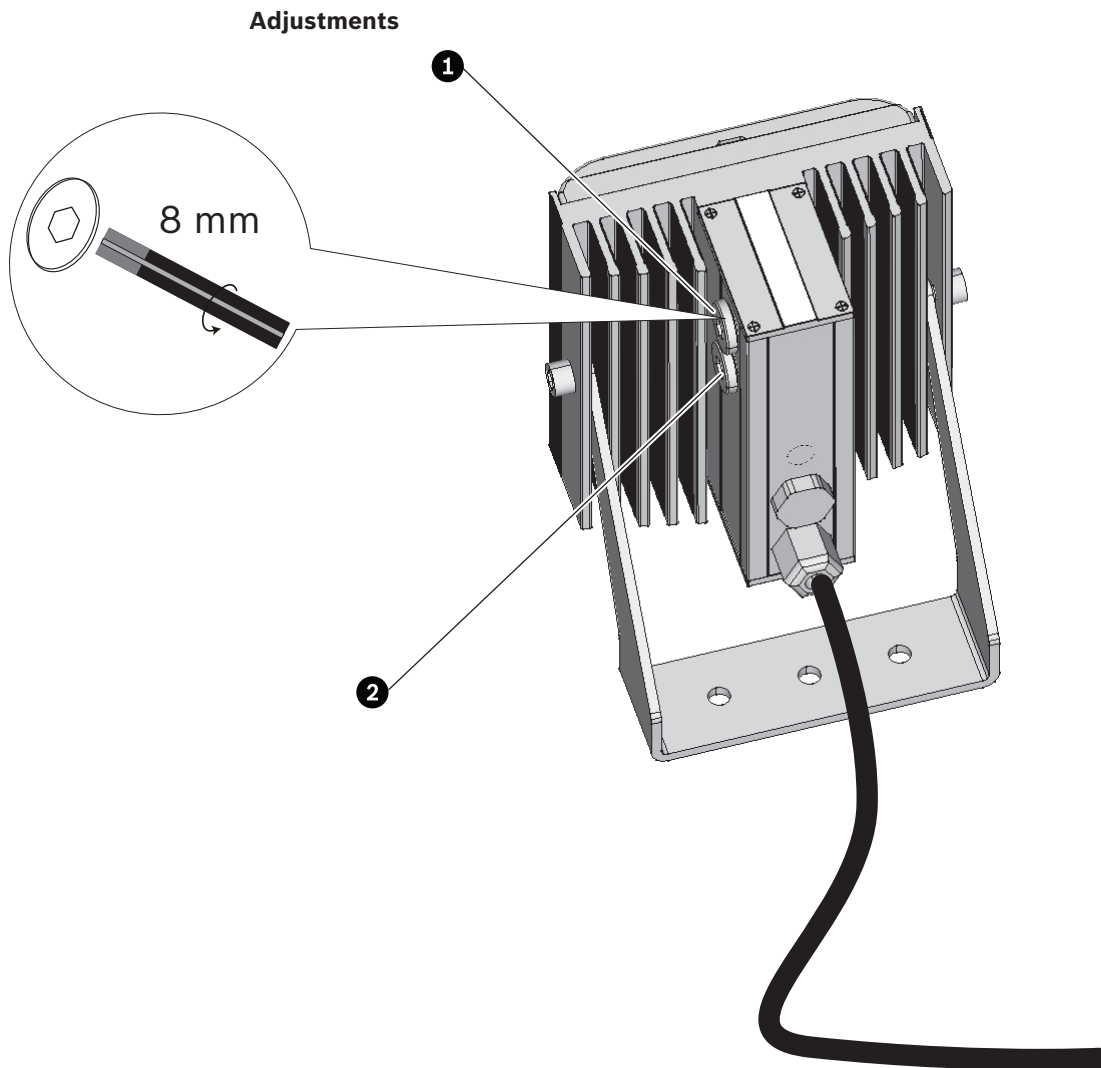
To use the light sensor in the illuminator to switch the day/night function of the camera:

1. Connect wires 1 (+ white) and 2 (- yellow) to the alarm input of the camera.
2. If required, adjust the **Photocell adjust** control to determine the switching points of the illuminator.

Camera masters the illuminator

To control illuminator switching from the camera:

1. Turn the **Photocell adjust** control fully counterclockwise.
2. Connect a relay output from the camera to wires 3 (- green) and 4 (+ blue).



To adjust the sensitivity (Photocell adjust **1**):

1. Use a thick flathead screwdriver to remove the protective sealing cap **1**.
2. Use a small screwdriver to adjust the internal control:
 - To use the remove switching control input, turn the control fully counterclockwise. (Now the IR LED lights when the green and blue wires are not connected; it does not light when the wires are connected.)
 - To set the light level at which the illuminator switches on, turn the control counterclockwise to turn on the illuminator when there is more light; turn it clockwise to turn it on when it is darker. (The factory setting turns on the illuminator at approximately 30 lx and turns it off at approximately 70 lx.)
3. Put the protective sealing cap back in place and secure.

To adjust the IR intensity (Power adjust **2**):

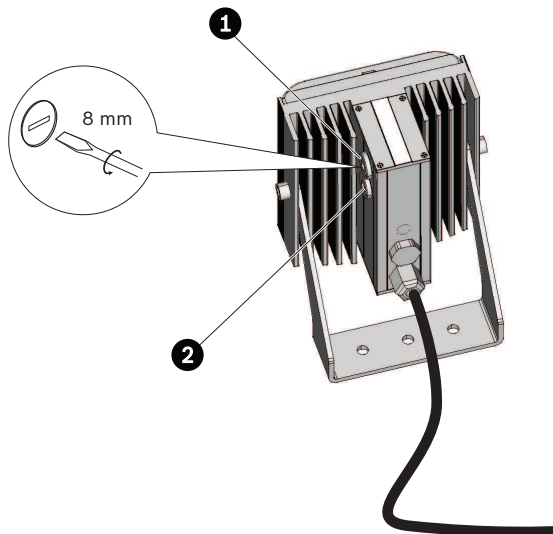
1. Use a thick flathead screwdriver to remove the protective sealing cap **2**.
2. Using a small screwdriver, turn the internal control counterclockwise to reduce the IR intensity. (The factory default is maximum power.)
3. Put the protective sealing cap back in place and secure.

3.2 Connecting the NIR-50xx0

Power

To power the illuminator, connect a PoE power supply to the RJ45 connector of the illuminator.

Adjustments



To adjust the sensitivity (Photocell adjust **1**):

1. Use a thick flathead screwdriver to remove the protective sealing cap **1**.
2. Use a small screwdriver to adjust the internal control:
 - To use the remove switching control input, turn the control fully counterclockwise. (Now the IR LED lights when the green and blue wires are not connected; it does not light when the wires are connected.)
 - To set the light level at which the illuminator switches on, turn the control counterclockwise to turn on the illuminator when there is more light; turn it clockwise to turn it on when it is darker. (The factory setting turns on the illuminator at approximately 30 lx and turns it off at approximately 70 lx.)
3. Put the protective sealing cap back in place and secure.

To adjust the IR intensity (Power adjust **2**):

1. Use a thick flathead screwdriver to remove the protective sealing cap **2**.
2. Using a small screwdriver, turn the internal control counterclockwise to reduce the IR intensity. (The factory default is maximum power.)
3. Put the protective sealing cap back in place and secure.

3.3 Setting up

To achieve the best results:

1. Mount and connect the illuminator as described above.
2. Complete the following steps at night and view the results on a monitor.
3. Adjust the pan of the illuminator to match the camera's field of view.
4. Loosen the bolts on each side of the unit and adjust the vertical alignment to maximize the results:
 - Tilt the unit downwards until the near part of the required field of view is saturated with light as viewed on the monitor.
 - Slowly tilt the unit upwards until the furthest part of the required field of view is illuminated correctly on the monitor.

5. Re-tighten the bolts.

4 Technical data

Optical	
Wavelength	850 nm or 940 nm
IR control	Adjustable IR intensity (10% to 100%)
Day/night switch	Photocell, sensitivity adjustable (20 lx to 70 lx)
Beam angles	10°, 20°, 30°, 60°, 80°, and 95°
Environmental	
Operation Temperature Range	-50 °C to +50 °C (-58 °F to +122 °F)
Protection	IP66

IIR-50850-SR | IIR-50940-SR

Power	
Power supply	12 to 32 VDC or 24 VAC \pm 10%
Power consumption	13 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 70 x 76 mm (4.33 x 2.76 x 2.99 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	750 g (1.6 lbs)
Bracket weight	0.2 kg (0.44 lbs)

IIR-50850-MR | IIR-50940-MR

Power	
Power supply	12 to 32 VDC or 24 VAC \pm 10%
Power consumption	26 W
Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 115 x 76 mm (4.33 x 4.53 x 2.99 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.06 kg (2.3 lbs)
Bracket weight	0.2 kg (0.44 lbs)

IIR-50850-LR | IIR-50940-LR

Power	
Power supply	12 to 32 VDC or 24 VAC \pm 10%
Power consumption	39 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 161 x 76 mm (4.33 x 6.34 x 2.99 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.4 kg (3.1 lbs)
Bracket weight	0.2 kg (0.44 lbs)

IIR-50850-XR | IIR-50940-XR

Power	
Power supply	12 to 32 VDC or 24 VAC \pm 10%
Power consumption	52 W
Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 213 x 76 mm (4.33 x 8.39 x 2.99 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.84 kg (4.1 lbs)
Bracket weight	0.2 kg (0.44 lbs)

NIR-50850-MRP | NIR-50940-MRP

Power	
Input voltage	Power-over-Ethernet (48 VDC nominal)
PoE IEEE standard	IEEE 802.3at Compliant (PoE+)
Power consumption	26 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 115 x 76 mm (4.33 x 4.53 x 2.99 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.06 kg (2.3 lbs)
Bracket weight	0.2 kg (0.44 lbs)



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