Installation Instructions

Infrared Inspection Windows (IRW Series)

For use on a flat surface of a type 4/12 enclosure

Preparation

The IRW series is a professional inspection device used in areas where extreme electrical potentials are present. Always use caution. Failure to follow the safety guidelines below could result in severe personal injury or death, in addition to equipment loss.

WARNING

Risk of electric shock, burn, or explosion.

- Gather all necessary permits prior to installation.
- Remove power to the equipment prior to installation. Verify that power is off using an appropriately rated electrical meter.
- Wear appropriate personal protective equipment (PPE).
- Observe and comply with the requirements of local mandates such as NFPA 70E and CSA Z462.
- Remove extraneous materials and debris from the installation area after power has been switched off.
- It is recommended that the door or panel into which the IR Window is to be affixed is removed, thereby allowing the installation to take place remotely, in a safe area.
- Observe that the minimum dielectric clearance requirements are maintained when installing the product.
- Record the transmission rates of the IRW window lens and understand how this is used to determine component temperature. It is recommended that the transmission rate be measured on each window with the actual inspection equipment.
- It is recommended that the transmission rate of the lens be checked at six-month intervals.

Specifications

Environment Type Rating	4/12
IP Rating	IP67
Max. operating temperature	500°F (260°C)
Frame material	Aluminum
Recommended locknut torque	140 to 180 in-lbs. (15.8 to 20.3 N-m)
Recommended cover fastener torque	15 in-lbs. (1.7 N-m)
Recommended maximum panel thickness	1/8” (3.175 mm) 1/4’’ (6.35 mm) IRW–3C-XT

Customer Support

For assistance and additional product information:

https://support.flir.com.

Installation Overview

Installation of this IRW infrared window follows the model of a nut and bolt fastener: A threaded base is inserted through a pre-made hole in the installation surface. A screw-on nut is then tightened from the opposite side, holding it in place.

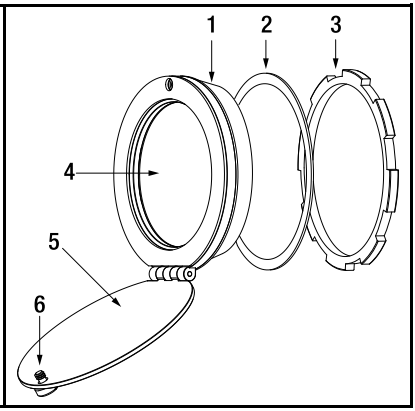
Only one hole is required, and the sizes are the same as those used for electrical conduit piping. Industry standard tools can be used throughout the process.

Packing List

- IRW Infrared window assembly
- Installation instructions
- Safety screw

Window Assembly Components

1. Frame base
2. Wall gasket
3. Locknut
4. Viewing pane
5. Cover
6. Cover fastener (thumb screw)



Transmission Rate

IR window transmission rate must be considered for accurate measurements.

Please visit https://support.flir.com for detailed information.

Care of the IR Window

Use only a high-grade isopropyl or methyl alcohol with a soft cloth to clean the window. Ensure that excess solvent is wiped from the window after cleaning.

Tools Required for Installation

1. Knockout punch or hole saw
2. Hydraulic kit or large wrenches (knockout punch option only)
3. Electric drill
4. Drill bit (Greenlee knockout punches require a ¾" drill bit. Hole saws typically require a ¼" drill bit)
5. Center punch

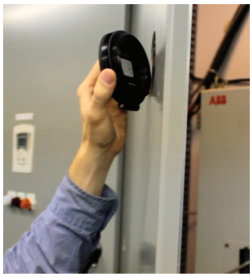
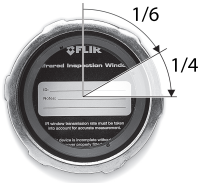
	Actual required hole diameter				
Part no.	**Nominal**	**Minimum**	**Maximum**	**Trade Size***	**Greenlee Punch**
IRW-2C	2-3/8" (60.3 mm)	2-3/8" (60.3 mm)	2.5" (63.5 mm)	2 in.	76BB
IRW-3C	3-1/2" (88.9 mm)	3-1/2" (88.9 mm)	3.625" (92.1 mm)	3 in.	739BB
IRW–3C-XT**	3-1/2" (88.9 mm)	3-1/2" (88.9 mm)	3.625" (92.1 mm)	3 in.	739BB
IRW-4C	4-1/2" (114.3 mm)	4-1/2" (114.3 mm)	4.672" (118.7 mm)	4 in.	742BB

**Trade size refers to NEMA Bulletin 71 standards for electrical conduit sizing*

***IRW-3C-XT has an extended thread with a total depth of 0.97 in. (24.6 mm)*

Installation

1	Use the center punch to mark where the center of the viewport is to be located.	
2	Drill the pilot hole using the appropriate drill bit.	

3	Create the hole in the installation surface. Use the sizing table to determine the correct knockout punch or hole saw.	
4	With the locknut removed and the wall gasket still fitted to the frame base, insert the window assembly through the cutout.	
5	Install and hand-tighten the locknut in a clockwise direction with the locknut teeth against the panel.	
6	Tighten the locknut to a torque of at least 140 in-lbs. (180 in-lbs. max.). This can typically be achieved by rotating the locknut one sixth to one quarter of a turn beyond hand tight. Ensure that window orientation is maintained during tightening.	
Ensure that the cover is closed and secured before restoring power to the equipment.		

Safety Screw

The included safety screw may be used in place of the thumbscrew. To install, remove the O-ring from the thumb screw threads and unscrew it from the cover. Screw in the safety screw and replace the O-ring.

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Website
http://www.flir.com

Customer support
http://support.flir.com

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