◆FLIR®   **INSTALLATION MANUAL**

Large Format Infrared Inspection Windows

Models IRW-xPC/xPS™

Introduction

Thank you for selecting the FLIR IR window. This manual applies to models IRW-6PC (6"), IRW-12PC (12"), and IRW-24PC (24") aluminum windows and IRW-6PS (6"), IRW-12PS (12"), and IRW-24PS (24") stainless steel windows.

Preparation

Check that the package contains the IR window, fitting template, IR window label, and fitting hardware. See **Fig-1**.

The required tools and personal protection equipment (PPE) are listed below; you will need these materials to perform a successful installation. Install the window on a vertical, flat surface; cut the installation holes using an angle grinder or a nibbler tool.

Fig-1

Required Tools

- Metal cutting tool such as nibbler or angle grinder (see **Fig-2**)
- Drill and 8mm (5/16″) drill bit
- Center punch
- De-burring tool or another file tool
- Socket or wrench (7/16")
- Metal treatment product with anti-corrosion properties (paint, sealer)

Fig-2

Personal Protection Equipment (PPE)

Work gloves and safety glasses are required. Please comply with all site PPE requirements.

Transmission Rate

Determine the transmission rate of the IR window you are installing. Notate the transmission rate on the supplied IR window label.

Field of View

The Field of View table, below, shows the horizontal and vertical views (in inches) for a variety of target distances for all models in this series. The table is based on an IR camera with a standard 24º lens (2" lens diameter) and 30º (max.) viewing angle (horizontal and vertical).

Field of View Reference Table (inches)

IR Target Distance	IRW-6PC_PS	IRW-12PC_PS	IRW-24PC_PS
8 inches	H = 18.0 V = 14.7	H = 35.1 V = 18.6	H = 70.8 V = 20.4
12 inches	H = 28.2 V = 18.3	H = 39.9 V = 22.2	H = 75.6 V = 24.0
18 inches	H = 35.2 V = 23.55	H = 46.9 V = 27.45	H = 82.6 V = 26.25
24 inches	H = 41.7 V = 28.8	H = 89.1 V = 32.7	H = 89.1 V = 34.5

Fitting the template

Affix the supplied cutting template to the appropriate area of the panel (**Fig-3**).

Hole punching

With the center punch, mark all fixing holes labelled 'A' on the cutting template (**Fig-4**).

Fig-3

Drilling holes

Drill the center-punched holes using an 8mm (5/16˝) drill bit. If using a nibbler, drill a pilot hole along the line labelled 'B'.

Cut-out sizing

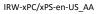Refer to the table below to determine the size of the cut-out.

Fig-4

IRW-xPC/xPS-en-US_AA

Cut-out Hole Sizing Reference Table

Model	Cut-out (mm)	Cut-out (in.)	Number of fixing holes
IRW-6PC_6PS	177 x 119	6.96 x 4.7	Eight (8)
IRW-12PC_12PS	262 x 164	10.3 x 6.44	Ten (10)
IRW-24PC_24PS	568 x 176	22.36 x 6.92	Fourteen (14)

Making the cut-out

Make the cut-out using a nibbler, grinder, or similar tool. **Fig-5** shows an angle grinder fitted with a metal cutting disc. After cutting a hole, smooth the rough edges with a de-burring tool or file, and peel away the remaining portion of the cutting template. To protect against long-term corrosion, treat bare metal surfaces with an anti-corrosion coating (paint, sealer, etc.).

Fig-5

Installing the IR window

After cutting the hole, install the window:
- Place the unit, complete with seals, on the front of the panel
- Fit the hardware, ensuring that a nut is affixed on each stud
- With the 7/16" wrench, tighten the hardware to these specifications: 40 inch/lbs. or 4.52Nm

Attaching the label

Correctly label the IR window. We supply each IR window with a label; this allows the camera operator to note the number of targets, target emissivity, and transmission rates of the viewing pane for a variety of IR cameras.

There may be multiple targets viewed through the IR viewing window; the label can reflect these. The most common method of locating the required targets is using the clock-face method, i.e. breakers at 4 o'clock position, etc. Place all such data on the label. This label also uses a pre-printed bar code system to allow for unique identification of each IR window.

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Limited Lifetime Warranty

Specifications

Part No.	IRW-6PC	IRW-12PC	IRW-24PC	IRW-6PS	IRW-12PS	IRW-24PS
Overall Height*	21.8cm	20.6cm	21.8cm	21.8cm	20.6cm	21.8cm
	8.6 in.	8.1 in.	8.6 in.	8.6 in.	8.1 in.	8.6 in.
Overall Width*	16cm	30.5cm	61cm	16cm	30.5cm	61cm
	6.3 in.	12.0 in.	24.0 in.	6.3 in.	12.0 in.	24.0 in.
Optic Specifications						
Overall aperture Ht.	15.0cm	12.7cm	15.0cm	21.8cm	20.6cm	21.8cm
	5.9 in.	5.0 in.	5.9 in.	5.9 in.	5.0 in.	5.9 in.
Overall aperture Width	9.1cm	23.6cm	53.0cm	9.1cm	23.6cm	53.0cm
	3.6 in.	9.3 in.	20.9 in.	3.6 in.	9.3 in.	20.9 in.
Temp. range	-40~617ºF (-40~325ºC) for optics					
Materials and Ratings						
IP/NEMA	IP65 / NEMA 4x			IP67 / NEMA 6		
Operating temperature	-40~392ºF (-40~200ºC) max.			-40~523ºF (-40~273ºC) max.		
Body material	Aluminum			Powder Coated Stainless Steel		
Grill material	Aluminum IP22 / IP2x Standard			Stainless Steel IP22 / IP2x Standard		
Optic material	UL 746, visual, UV/IR transmissive polymer -40~617ºF (-40~325ºC)					
Gasket	UL 94 TVA TPE -40~523ºF (-40~273ºC)					
Hardware	316 Stainless Steel					
Auto ground	Yes					
Voltage range	Any					
Agency Approvals	Certified by UL (USA) & cUL (Canada) to the following standards: 50V, 50E, 756C: Impact and Flammability, 1558: Impact and Load Resistance, 508A: ANSI 508A CSA C22.2 No. 14-13 IP65 / NEMA 4x Lloyds of London Type Approval American Bureau of Shipping (ABS) DNV (Det Norske Veritas) P261.1E Maritime, Vessel and Offshore Applications IEEE C37 20.2.a.3.6: Impact and Load BSI Quality ISO 9001 Certified					

*These dimensions are not installation dimensions. Do not cut prior to receiving FLIR window and installation template.

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