

FLUKE®

CV200, CV300, CV400
CV201, CV301, CV401
ClirVu® IR Windows
Installation Guide

English

PN 4341125

May 2013

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Product specifications are subject to change without notice.

Introduction

The ClirVu IR Window allows the flexibility to inspect an electrical enclosure both visually and with infrared. Use this accessory on the flat surface of a Type 1, 2, 3/12, 3, and 4/12 enclosures, or as appropriate. All models are for indoor and outdoor use. Table 1 is a list of the models available from Fluke.

Table 1. ClirVu IR Window Models

Model	IR Window Size
CV200, CV201	50 mm (2 in)
CV300, CV301	75 mm (3 in)
CV400, CV401	100 mm (4 in)

How to Contact Fluke

To contact Fluke, call one of the following telephone numbers:

- Technical Support USA: 1-800-44-FLUKE (1-800-443-5853)
- Calibration/Repair USA: 1-888-99-FLUKE (1-888-993-5853)
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-3-3434-0181
- Singapore: +65-6799-5566
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at <http://www.fluke.com/irwindows>.

To view, print, or download the latest manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

Safety Information

A Warning identifies conditions and procedures that are dangerous to the user. Symbols used on the Product and in this document are in Table 2.

Warning

To prevent damage or injury:

- **Read all directions before the installation.**
- **Comply with local and national safety requirements when working in hazardous locations.**
- **Wear appropriate eye and ear protection.**
- **Check the window for cracks and damage before installation.**
- **Keep the cover closed and latched except during installation, viewing, or temperature measurement.**

Table 2. Symbols

Symbol	Explanation
	Risk of danger. Important information. See manual.
	Underwriters' Laboratories, Inc. UL recognized component in North America.
	Conforms to requirements of European Union directives.
TYPE 4/12	NEMA Standard. Suitable for indoor/outdoor use.
	This product complies with the WEEE Directive (2002/96/EC) marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Product Category: With reference to the equipment types in the WEEE Directive Annex I, this product is classed as category 9 "Monitoring and Control Instrumentation" product. Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.

Before You Start

When your IR Window arrives, unpack the unit. Identify and make sure all the parts are in the shipment. See Figure 1.

Required tools for installation, see Figure 2:

- Electro-hydraulic hole punch
- Greenlee Punch/Die
- Drilling machine
- Center punch
- Calibrated torque driver

Site Preparation

To prepare the installation site:

1. Mark a pilot hole with the center punch. See Figure 3.
2. Drill a 6 mm (0.2 in) pilot hole with the twist drill.
3. Use a Kwik Stepper drill bit to enlarge the 6 mm (0.2 in) pilot hole to 20 mm (0.8 in). Or, drill a 10 mm (0.4 in) pilot hole and then enlarge the hole to 22.5 mm (0.875 in) with a Greenlee Punch/Die 71BB. See Figure 4.
4. Select the correct punch/die. See Table 3.
5. Use the Greenlee Punch/Die with the Electro-hydraulic hole punch to make the hole diameter listed in Table 3. See Figure 5.

Table 3. Tool Selection

IR Window Size	Hole Size	Greenlee Punch/Die PN
50 mm (2 in)	61.37 mm (2.416 in)	76BB
75 mm (3 in)	89.89 mm (3.539 in)	739BB
100 mm (4 in)	115.42 mm (4.544 in)	742BB

6. Deburr the holes and remove any shavings.
7. Degrease the front panel.

Installation

To install:

1. Insert the IR Window assembly into the punched hole.
2. Align and firmly hold the IR Window in place.
3. Apply a slight amount of torque to each of the four jam-nut screws to break them loose from the install position.
4. Incrementally tighten each jam-nut screw in a cross-pattern to the torque recommended in Table 4. This torque makes sure that the frame gasket is compressed for an optimum seal. See Figure 6.

Note

If a calibrated torque driver is not available, be careful that you do not over tighten and break the jam-nut screws.

Table 4. Torque Values for Jam-Nut Screws

Model	Torque (max.)
CV200, CV201	14 in lb
CV300, CV301	25 in lb
CV400, CV401	50 in lb

Window Door

Close the window door firmly and twist the quarter-turn fastener bail from vertical to horizontal to latch the door. See Figure 7.

The window is installed and ready for use.

Security Key Conversion Kit

Where security and safety standards require limited access to the window, an optional Security Key Conversion Kit is available from Fluke. The conversion kit replaces the standard hand-turn door latch with a door latch that can only be opened with a key. Two kit sizes are available. See Table 5.

Table 5. Security Key Conversion Kits

Model	Description	PN
CV200, CV300	Quarter-Turn Stud Conversion Kit 82	4354766
CV400	Quarter-Turn Stud Conversion Kit 85	4354775

To replace a quarter-turn fastener:

1. Use a wire cutter or needle nose pliers to remove the existing retainer.
2. Install the new stud with a new retainer. See Figure 8.

Note

Models CV201, CV301, and CV401 include the security key.

Lifetime Limited Warranty: Infrared Window

This Fluke product will be free from defects in material and workmanship for the lifetime of the product. "Lifetime" is defined as seven years after Fluke discontinues manufacturing the product, but for at least ten years from the purchase date. This warranty does not cover damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

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