FLUKE®

COMPLIANCE without compromise
SAFETY without sacrifice
YOUR RESULTS MATTER™

ClirVu® Series IR Windows

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Safety shouldn't be secondary

If Fluke has learned anything in more than 65 years, it's not to compromise quality in order to beat a competitor's price. Asking, "How well can we make it?" versus "How cheaply can we make it?" may not win price wars, but it has established Fluke as the standard of excellence, and the preferred name in test and measurement equipment.

- **Every time you open a panel cover, you expose yourself to the potential dangers of arc flash.**
- **99.9 % of all arc flash incidents occur when the panel door is opened. Eliminate that risk with ClirVu® IR windows.**

Compliance. The future is clear.

"Better safe than sorry," is becoming a modern mantra for companies who want protection from the physical and economic tragedies that can result from arc flash incidents.

If there's ever a problem, it won't be a question of whether or not you've done the minimums, but whether you've done as much as possible to protect your people. With Fluke IR Windows comes the confidence that when it comes to the safety of your people, you have not compromised.

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Fluke ClirVu® IR Windows

Not just a better window —a clearer view.

The solution

Don't open the panel door.

Once a ClirVu® IR Window is installed, there's no more need to power down or remove panels—you may never have to open the panel door again. Inspections are conducted quickly, easily, and of course, safely. Decreasing risks of arc flash may also result in lower insurance costs.

Your greatest investment is not what's behind the panel, so when Fluke made the decision to manufacture infrared windows, our priority was to offer the ultimate protection for the electricians, engineers and inspectors who risk their lives doing their jobs.

At the same time, the quest for safety has led to numerous technological advancements resulting in faster installation and inspections. It's safe to say, ClirVu is all you need to be both compliant and more productive at your job.

When a product far exceeds the minimum safety and performance standards, that's confidence.

That's Fluke

Fast installation with AutoGround™ design—less than 5 minutes.

Yes, five minutes. That's about how long it takes to install a Fluke ClirVu® CV Series IR Window, the only IR Window with AutoGround™. With its AutoGround design, Fluke has eliminated the need to separately ground each metal component of the window. The time saved and safety benefits from installation alone clearly make Fluke the preferred choice.

Torture Tested™ to the highest arc blast test ratings

- IEEE C37.20.7: 63 kA Arc tested at KEMA
- UL 50/50E/50V, UL1558, IEC60529-1: IP67, IEC 60068, NEMA 4/12, CSA C22.2 NO. 14-13:2012, and CE
- Grounds instantly to metal enclosure with patent-pending AutoGround™ process
- Maintains panel arc test ratings up to 63 kA when properly installed

Convenience at the turn of a key

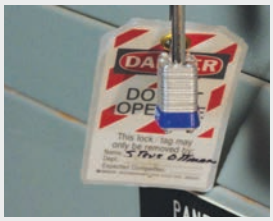
ClirVu® IR Windows are designed with hinged covers that can be easily opened with the quarter turn latch or key to perform an infrared inspections. The covers also protect the windows from accidental exterior impact.

It's time

Save time with quick and easy installation —5 minutes or less!

- One technician
- One hole with standard Greenlee® punch
- Panel door does not need to be removed
- Grounds instantly to metal enclosure with patent-pending AutoGround™ process
- Maintains panel arc test ratings up to 63 kA when properly installed

1



Lock out–tag out

2

Punch hole

3

Attach and secure cover

Watch the video at fluke.com/install

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Can you afford not to install

ClirVu® IR Windows?

Arc flash accidents can cost an employer in excess of a million dollars. Lost production, equipment and facility repair and replacement may just scratch the surface of costs. There's always the potential for lawsuits, skyrocketing insurance premiums, and staggering fines from OSHA (or other occupational safety bodies around the world). Of course, the monetary costs are overshadowed by serious injuries, or the loss of a valued employee's life. Fluke ClirVu IR Windows gives you and your company an extra layer of protection to avoid the tragedy of an arc-flash incident.

Hierarchy of controls

Occupational Health and Safety Organization (OSHA) and the National Fire Protection Association (NFPA) recommend the system of Hierarchy of Controls to minimize or eliminate exposure to occupational hazards. OSHA and NFPA are United States organizations but the Hierarchy of Controls concept is relevant worldwide.

Elimination/substitution—removes a hazard all together or controls a hazard by substituting something in its place that would be non-hazardous or less hazardous.

Engineering controls—physical changes or modifications designed to eliminate or reduce hazardous exposure to equipment or a work environment. This is the preferred method for eliminating and reducing workplace hazards.

Safe work practice controls—safe work practices are designed to change the way a job is performed to remove the employee from exposure to the workplace hazard.

Administrative Controls—changes to include additional backup workers, breaks and the rotation of workers to reduce exposure to work hazards.

Personal Protective Equipment—protective equipment or clothing worn by employees to reduce injuries or exposure to hazardous or toxic substances.

Arc flash facts

The arc flash itself can achieve temperatures in excess of 35,000 °F.
Source: National Fire Protection Association

Approximately 2,000 workers will be admitted to hospital burn units this year due to thermal burns from arc flash or arc blast accidents.
Source: National Fire Protection Association

5 to 10 arc flash explosions occur every day in the US.
Source: CapShell, Inc.

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The line

Fluke ClirVu® IR Windows are **Torture Tested**™

From a northern Canadian winter to a California desert to the corrosive conditions of offshore oil rigs and anywhere in between, you can count on ClirVu® IR Windows to stand up to the challenge.

- No more removing the panel door for installation.
- A significant reduction of work permit requirements and NFPA 70E processes are now in your future
- Full PPE is often not required so inspections are done faster and more comfortable

Arc blast protection is assured:

- High temperature silicon gaskets
- Mounting and door latches provide high pressure gasket compression
- Die cast components are manufactured with the highest strength alloys (ZA-27 and EZAC)
- Jam nut screws are made from 4037 steel, heat treated to 160,000 psi tensile

Torture Tested to the highest test ratings

- IEEE C37.20.7 63 kA Arc tested at KEMA, UL 50/50E/50V, UL1558, IEC60529-1: IP67, IEC 60068, NEMA 4/12, CSA C22.2 NO. 14-13:2012, and CE

Corrosion and UV resistance for challenging outdoor environments:

- All hardware is made from stainless steel or zinc plated steel
- Die cast components are plated with black chromium over high phosphorous electroless nickel

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Specifications

Model	CV400	CV401	CV300	CV301	CV200	CV201	CLKT
Size	95 mm (4 in)		75 mm (3 in)		50 mm (2 in)		100 mm, 75 mm and 50 mm (4, 3 and 2 in)
General							
Voltage range	Any						Any
NEMA Environment Type	Type 4/12 (indoor/outdoor)						Type 3/12
AutoGround™	Yes						Yes
ClirVu® Optic	Yes						Yes
Operating temperature	-40 °C to +232 °C (-40 ° F to +450 °F) and +260 °C (500 °F) intermittent						-40 °C to +232 °C (-40 ° F to +450 °F)
Body material	EZAC and ZA-27 high strength zinc/aluminum alloy						Anodized aluminum
Ratings and testing							
Arc-Tested (IEEE C37.20.7)	63 kA for 30 cycles @ 60Hz at KEMA						50 kA for 30 cycles @ 60 Hz at KEMA
UL 50V component recognition	Yes						Yes
UL 50 /NEMA Environmental Rating	NEMA Type 4/12						NEMA Type 3/12
UL1558	Yes						No
CSA C22.2 No.	Yes						Yes
CSA Type Rating	Type 4						Type 3/12
IP rating	IP67 at TUV						IP55
Lloyds Register	Up to 11 kV marine switchgear, indoor or outdoor (offshore only)						
Vibration rating	IEC60068-2-6 at TUV						IEC60068-2-6
Humidity rating	IEC60068-2-3 at TUV						IEC60068-2-3
Install							
Actual mounting hole diameter required	115.42 mm (4.544 in)		89.89 mm (3.539 in)		61.37 mm (2.416 in)		50 mm 43.2 mm (1.7 in); 75 mm 69.9 mm (2.75 in); 100 mm 92 mm (3.62 in)
Greenlee Punch Kit = Punch / Die	742BB = 2984AV / 2983AV		739BB = 1431AV / 1432AV		76BB = 441AV / 442AV		50 mm 06974/04013; 75 mm 04247/04246; 100 mm Hole Saw Only
Door Latch	Hand Turn	Security Key	Hand Turn	Security Key	Hand Turn	Security Key	Hand turn
Optics							
Optic insert diameter	95 mm (3.74 in)		75 mm (2.96 in)		50 mm (1.97 in)		100 mm, 75 mm and 50 mm (4, 3 and 2 in)
Warranty	Lifetime replacement against manufacturing defects						

For more detailed specifications download datasheets at www.fluke.com/irwindows

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