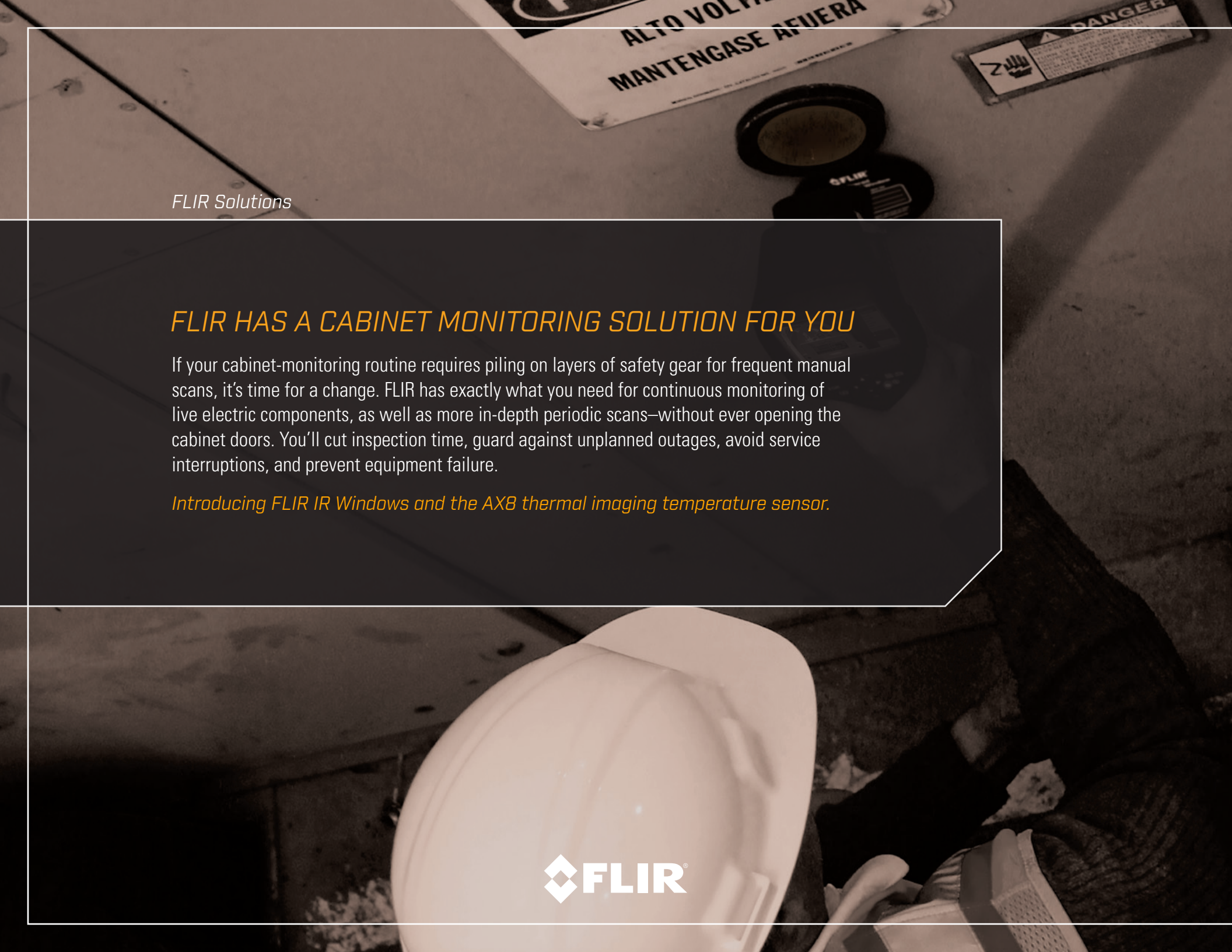
INSPECT & MONITOR

24/7 SOLUTIONS FOR ELECTRICAL CABINETS

IR Windows & AX8 Thermal Imaging Temperature Sensor

FLIR®



FLIR Solutions

FLIR HAS A CABINET MONITORING SOLUTION FOR YOU

If your cabinet-monitoring routine requires piling on layers of safety gear for frequent manual scans, it's time for a change. FLIR has exactly what you need for continuous monitoring of live electric components, as well as more in-depth periodic scans–without ever opening the cabinet doors. You'll cut inspection time, guard against unplanned outages, avoid service interruptions, and prevent equipment failure.

Introducing FLIR IR Windows and the AX8 thermal imaging temperature sensor.

FLIR®

ROUTINE INSPECTIONS OR CONTINUOUS MONITORING?

IR Windows and the AX8 thermal sensor are your ideal solutions for finding faults in electrical cabinets. If you choose an IR Window, you get an easy and affordable option that reduces the cost and time required to do an inspection. Plus, it adds a barrier between you and energized equipment to protect you from arc flash accidents. If you choose the AX8, you'll benefit from continuous monitoring of critical electrical infrastructure. The sensor also helps you to conveniently monitor components that are difficult to see through an IR Window or camera.

IR WINDOW KEY BENEFITS

- Reduces the need to open cabinets for inspections
- May reduce the need for layers of heavy protective gear*
- Easy to install
- Shortens inspection time
- Cuts the cost of inspections

AX8 KEY BENEFITS

- Continuous temperatue monitoring 24/7
- Live video streaming for remote monitoring
- Easy integration
- Small and compact
- Easy to install

*Personal protective equipment (PPE) may still be required as determined by your plant safety personnel.

IR WINDOWS

Anodized Aluminum or Stainless Steel Windows with PIRma-Lock™

FOR SAFER, MORE EFFICIENT ELECTRICAL IR INSPECTIONS

You put your life at risk every time you inspect live electric components–but you don't have to. FLIR's IRW-Series inspection windows add a protective barrier between you and energized equipment. There's no need to pile on the layers of protection needed to open up the electrical cabinet. You'll perform inspections more efficiently and reduce the threat of arc flash injury, all while staying in compliance with NFPA 70E requirements.

FLIR IRW-Series windows feature a permanent hinged cover that flips open easily, so there's nothing to drop, mix up, or lose. Choose the standard anti-corrosion anodized aluminum frame, or if there are mixed-metal concerns, opt for durable stainless steel. This will help prevent galvanic corrosion from contact between the stainless steel cabinet and window frame.

KEY BENEFITS

- Uses standard US punch tools for hole knockouts
- Automatically grounds metal components
- PIRma-Lock ring nut locks window tight inside the panel
- Simple flip-open hatch secured with thumb screw releases
- Permanently-hinged cover prevents dropping, mix-ups, and loss
- Inside label for permanent identification
- Transmits short-, mid-, and longwave IR images
- Works with all thermal and visual inspection cameras
- Allows laser pointers and illumination to shine through
- Saves time and labor by eliminating the need to remove panel covers
- Can reduce or eliminate need for cumbersome PPE
- Stainless steel option resists corrosion by preventing contact between dissimilar metals
- Durable for harsh environments and the outdoors

Anodized aluminum IR inspection windows

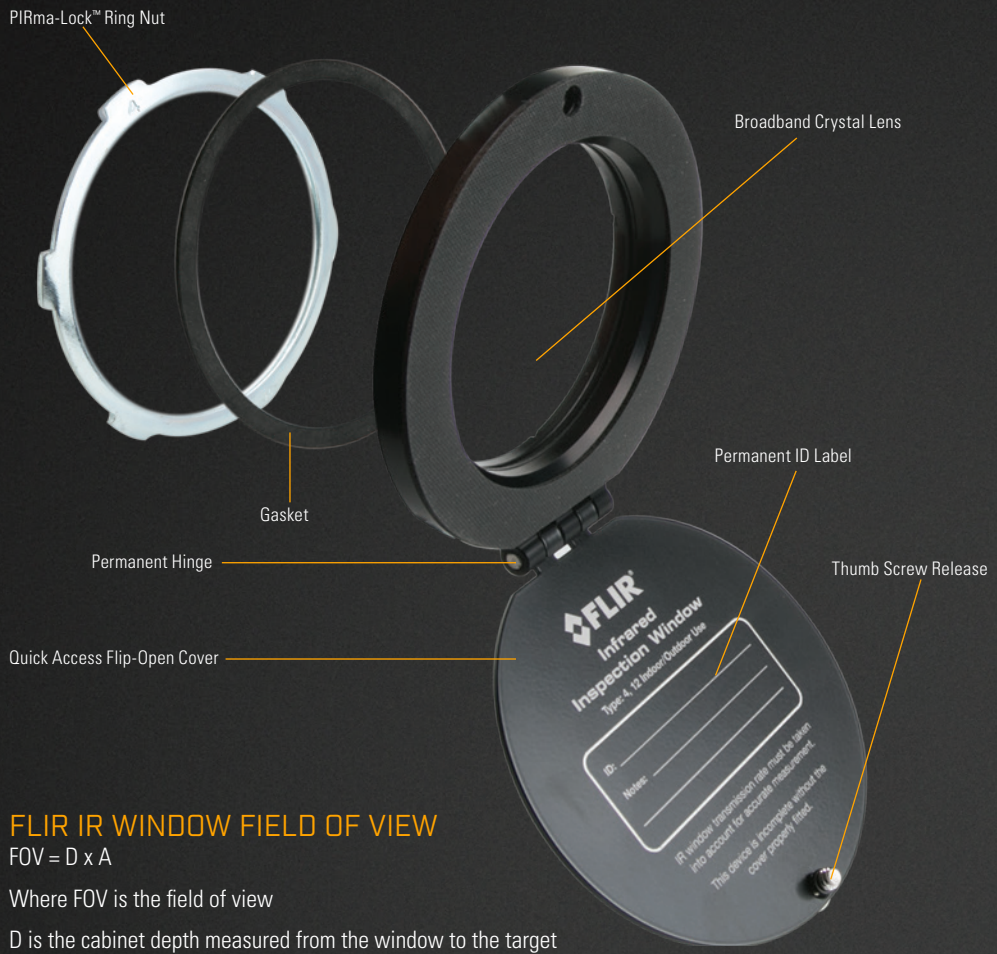
Stainless steel IR inspection windows

EASY INSTALLATION

Step 1: One hole to cut

Step 2: Easy placement

Step 3: Single PIRma-Lock™ ring nut



FLIR IR WINDOW FIELD OF VIEW

FOV = D x A

Where FOV is the field of view

D is the cabinet depth measured from the window to the target

A is the multiplication factor from the following table:

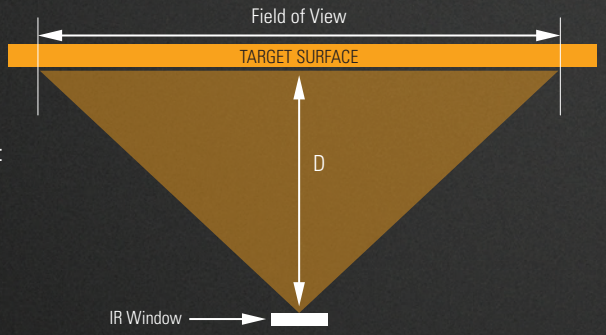
IRW-Series Model	IRW-2C or IRW-2S	IRW-3C or IRW-3S	IRW-4C or IRW-4S
Tilting any FLIR camera lens	2.4	2.7	3.2

EXAMPLE:

Using a 3" (IRW-3C) window with a lens 12" from the target:

FOV = 12" x 2.7

FOV = 32.4"



SPECIFICATIONS

Model	IRW-2C/2S	IRW-3C/3S	IRW-4C/4S
Size	2" Window	3" Window	4" Window
NEMA Environment Type	Type 4/12 (outdoor/ indoor)	Type 4/12 (outdoor/ indoor)	Type 4/12 (outdoor/ indoor)
Voltage Range	Any	Any	Any
Automatically Grounded	Yes	Yes	Yes
Maximum Operating Temperature	260°C/500°F	260°C/500°F	260°C/500°F
Body Material – IRW-xC Type	Anodized aluminum	Anodized aluminum	Anodized aluminum
Body Material – IRW-xS Type	AISI grade 316 stainless steel	AISI grade 316 stainless steel	AISI grade 316 stainless steel
Gasket Material	Silicone	Silicone	Silicone
Hardware Material	Steel	Steel	Steel
Size Specifications			
Overall Height	85.5 mm (3.36")	107.4 mm (4.22")	136.5 mm (5.37")
Overall Width	73 mm (2.87")	99 mm (3.89")	127 mm (5.01")
Overall Thickness	25.5 mm (1.00")	26.86 mm (1.05")	29.25 mm (1.15")
Required Actual Hole Diameter (Nominal)	60.3 mm (2-3/8")	88.9 mm (3-1/2")	114.3 mm (4-1/2")
Greenlee Punch	76BB	739BB	742BB
Recommended Max Panel Thickness	3.2 mm (1/8")	3.2 mm (1/8")	3.2 mm (1/8")
Optic Specifications			
Optic Diameter	50 mm (1.97")	75 mm (2.95")	95 mm (3.74")
Viewing Aperture Diameter	45 mm (1.77")	69 mm (2.71")	89 mm (3.50")
Viewing Aperture Area	1590 mm^2 (2.46 in^2)	3739 mm^2 (5.79 in^2)	6221 mm^2 (9.64 in^2)
Optic Maximum Temperature	1355.6°C (2474°F)	1355.6°C (2474°F)	1355.6°C (2474°F)
Ratings and Testing			
UL Component Recognition (UL 50V)	Yes	Yes	Yes
UL 50 / NEMA Environment Rating	Type 4/12	Type 4/12	Type 4/12
Arc Flash Testing, IEC 62271-200 (KEMA)*	5 kV, 63 kA for 30 cycles at 60 Hz	5 kV, 63 kA for 30 cycles at 60 Hz	5 kV, 63 kA for 30 cycles at 60 Hz
IP Rating, IEC 60529 (TUV)*	IP67	IP67	IP67
Vibration Testing, IEC 60068-2-6 (TUV)*	100 m/s^2 vibration withstand	100 m/s^2 vibration withstand	100 m/s^2 vibration withstand
Humidity Testing, IEC 60068-2-3 (TUV)*	Extreme humidity withstand	Extreme humidity withstand	Extreme humidity withstand
Mechanical Testing, ANSI/IEEE C37.20.2 section A3.6 (TUV)*	Impact and load resistant cover	Impact and load resistant cover	Impact and load resistant cover
Maximum Pullout Strength	657 kg (1450 lbs)	1655 kg (3650 lbs)	1678 kg (3700 lbs)
CSA Certification, C22.2 No. 14 or 508	Yes	Yes	Yes

*Test results valid for IRW-2C, IRW-3C, and IRW-4C only.

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Specifications are subject to change without notice

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