LUMASENSE® TECHNOLOGIES

MIKRON Thermal Imaging

An effective, safe, patented UL- and CSA approved method for inspecting electrical cabinet interiors while cabinets are closed and under electrical load.

Spyglass™ Lens and ViewPorts

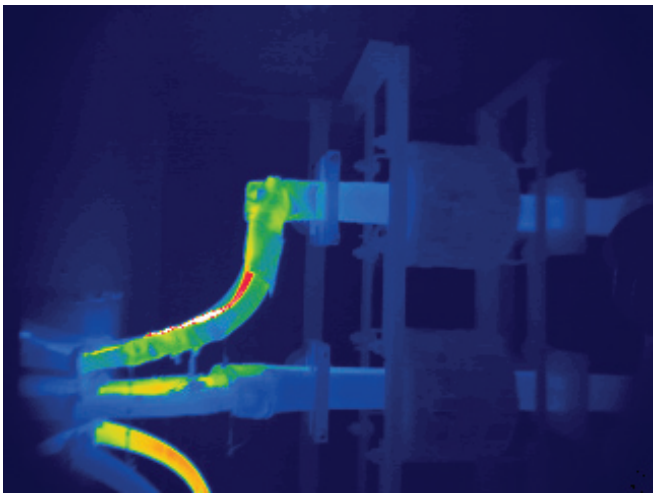
- View the entire cabinet through a 0.5" ViewPort aperture
- A safer, easier way to inspect electrical cabinets—No downtime required to de-energize circuits for inspection
- ViewPorts comply with IEEE Std. C37.20.2-1999
- Suitable for both low- and high-voltage applications
- ViewPorts are easy to install and virtually maintenance-free
- 53°H x 40°V (66° Diagonal) FOV
- Spyglass Attaches to Mikron M7500, MC320, 7600PRO or M78XX Cameras

LumaSense Spyglass™ ViewPort

Spyglass™ Lens Provides a Solution to Tedious, Dangerous Inspections

Hotspots in electrical cabinets can be quickly pinpointed while circuits are energized and under load, using Mikron's Spyglass™ Lens and economical Viewports.

Raising the safety and convenience standard for thermal inspections, the Spyglass™ Lens and Viewport encourage frequent examinations of electrical switchgear because—with cabinet doors closed—no downtime is required to de-energize circuits for safety reasons.



Thermal Image as Seen Through Spyglass™ Lens

Characteristics of the solution:

- Permits thermal inspection of electrical switch gear without opening the enclosure and disconnecting circuits.
- Views entire scene through a 0.5" (13 mm) diameterhole in the cabinet.
- Offers 53°H x 40°V (66° Diagonal) Field of View.
- Provides minimum focus range of 3".
- Large depth of field reduces the need to re-focus for different cabinet depths.
- Provides Temperature Measurement accuracy: ±3 °C
- Weighs only 1.14 lbs. and measures 6.4" (long) x 2.75" (Diameter)
- Attaches to the Mikron 7500, MC320, 7600, or 78XX camera thus making the camera a multi-purpose imager.
- Spyglass™ lens and Viewports are patented under US Patent No. 6,798,587 B2

Spyglass™ Lens (Part Number 19440-1)

The Spyglass™ Lens is a "fisheye lens," with its wide field of view (53° horizontal by 40° vertical, 66° diagonal,) allows easy scanning of the interior of the electrical cabinet through the ViewPort, providing a temperature measurement accuracy of ±3°C.

The Spyglass™ Lens attaches to the LumaSense MC320 industrial process-control camera. It also attaches to the premium PPM inspection camera, the 7600PRO, and the economical PPM cameras, the M78XX. No matter which camera the Spyglass is used with, it allows the user to view the entire electrical panel interior from just inches away.

With a minimum focus range of three inches (3"/8 cm), and large depth of field, the Spyglass™ Lens reduces the need to re-focus for different electrical cabinet depths.

M7800 with Spyglass™ Lens

Spyglass™ ViewPorts

The unique design of the ViewPort uses only a 0.5 inch aperture, maintaining the integrity and safety rating of the cabinet. ViewPorts have no metal screen barrier--barriers can skew thermal readings, or break and compromise safety. The Viewport is unaffected by moisture, dirt, UV and corrosive environments.

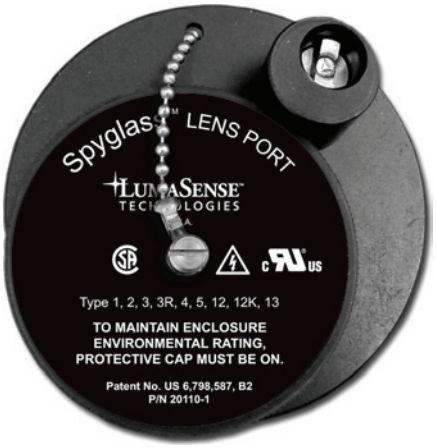
Unlike an infrared window, it never needs cleaning or replacement glass. When used with the plastic-tipped Spyglass™ lens, there is no "path to ground" through the camera, enhancing operator safety.

Spyglass™ Standard ViewPort Model 20110-3

The Spyglass Standard ViewPort design contains two o-rings, ensuring that the addition of this assembly still maintains complete immunity to dust and water penetration to the inside of the cabinet.

Spyglass™ Lockable ViewPort Model 20110-2

The Lockable ViewPort design contains three o-rings, ensuring that the addition of this assembly still maintains complete immunity to dust, water, and oil penetration to the inside of the cabinet. The keyed locking feature prevents unauthorized opening of the ViewPort protective cover.



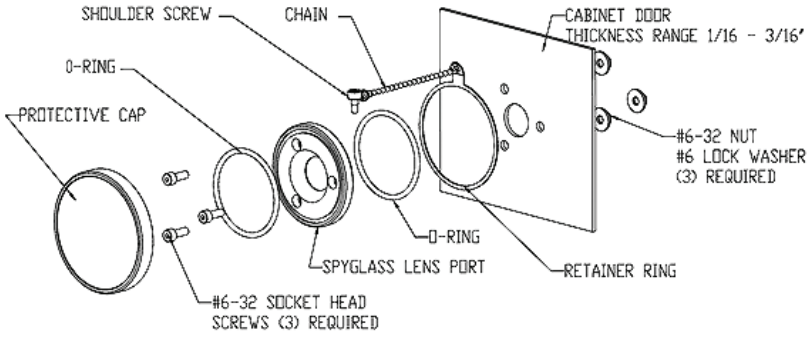
Spyglass™ Lockable ViewPort with Window Model 20110-1

The Lockable ViewPort with Window design includes an infrared window and contains four o-rings, ensuring that the addition of this assembly still maintains complete immunity to dust, water, and oil penetration to the inside of the cabinet. This model also includes the keyed locking feature, which prevents unauthorized opening of the ViewPort protective cover.

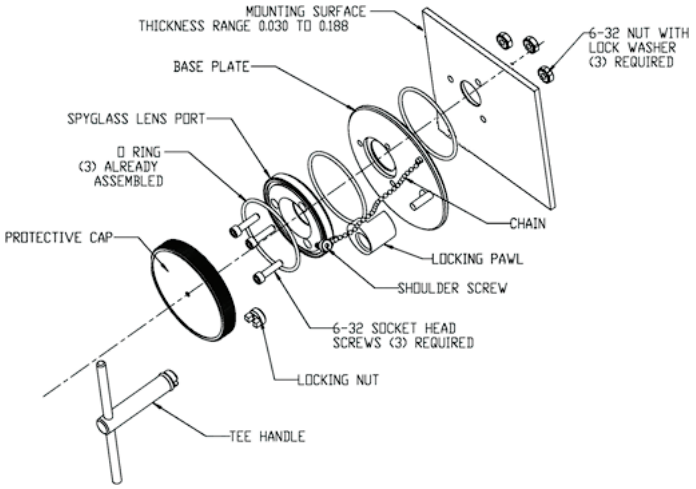
Design and Approvals: All three styles (illustrated above) of the patented Mikron ViewPorts have received UL approval for use in the United States and Canada. Furthermore, they have received CSA approval. They also comply with IEEE Std. C37.20.2-1999. The ViewPorts are designed for use with NEMA Type 1, 2, 3, 3R, 4, 5, 12, 12K, and 13 enclosures. All styles of LumaSense ViewPorts are approved for installation at the OEM level, or as a retrofit in the field.

Spyglass™ Technical Drawings

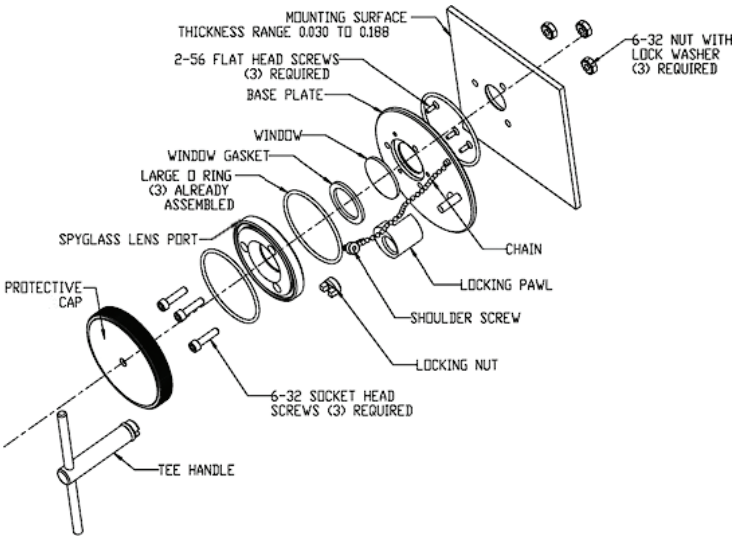
Spyglass™ Standard ViewPort Model 20110-3



Spyglass™ Lockable ViewPort Model 20110-2



Spyglass™ Lockable ViewPort Model 20110-1



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