Ring Photo Sensor

Description

The roof-mounted Ring Photo Sensor provides external light level data to the View Dynamic Glass system to allow optimization of tint levels for each Dynamic Glass façade.

System Requirements

The Ring Photo Sensor communicates to the View system and receives power via Power-over-Ethernet (PoE) utilizing customer provided PoE switch network or midspan PoE Power Injector as appropriate.

- POE voltage requirements: Class 0, 36 - 57 VDC. Powering Device should be Type 1 and not higher.
- Consult with facility IT team for best options.

Ethernet cable requirements:
- Category CAT5E or above.
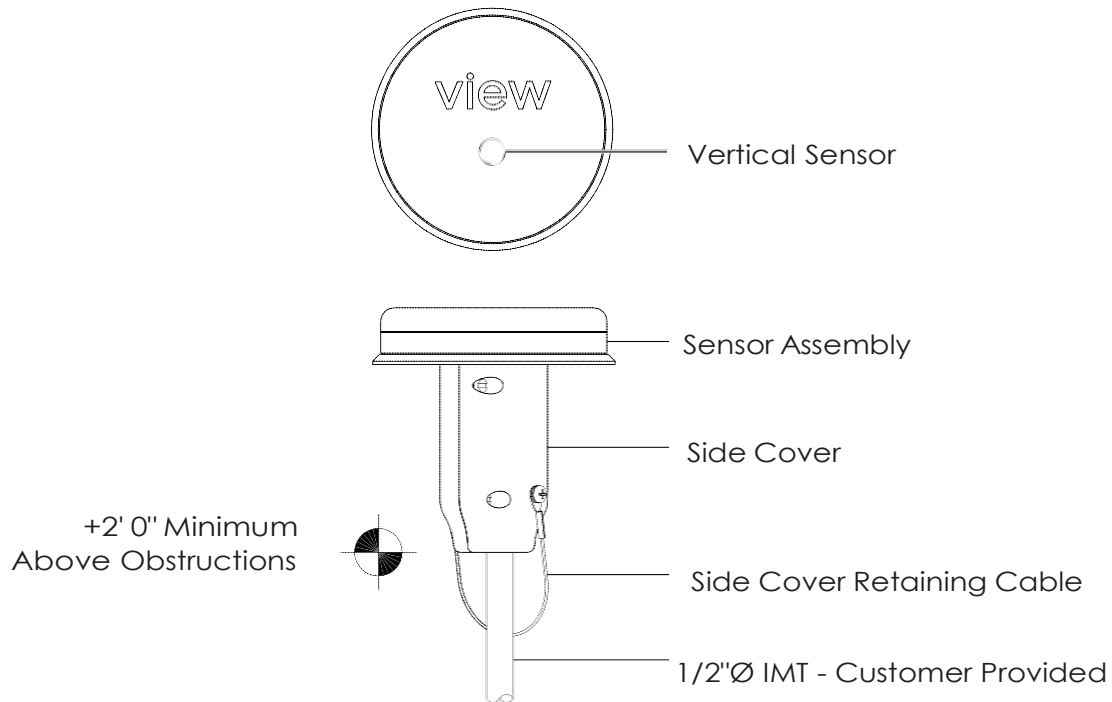- Maximum cable segment length is 328 feet (100 meters).

Mast requirements:
- 1/2 inch intermediate metallic tubing (IMT) - Note: Do not use EMC/EMT.
- Mount must be bonded to building ground.
- Note: For Ring Sensor installations outside of the USA, an adaptor will be supplied with the part which will couple directly to standard imperial threaded ends of RMT/RMC typically authorized and available in those locations. If there are specific concerns at an international site, please highlight these to the View Project Manager as soon as possible so an acceptable resolution can be reached in time for installation.

Environmental Specifications:
- Storage temperature: -40C to 85C (-40F to 185F)
- Operating Temperature: -20C to 65C (-4F to 149F)

Installation Overview

Vertical Sensor

Sensor Assembly

Side Cover

+2' 0'' Minimum
Above Obstructions

Side Cover Retaining Cable

1/2''Ø IMT - Customer Provided

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Installation Steps

Step 1: Preparing for Installation of the Ring Photo Sensor

- Survey the installation site and select an area that provides the mast-mounted Ring Photo Sensor with an unobstructed 360° view horizontal, 200° vertical (10° below horizontal).
- Mount minimum of 2 feet (0.6 M) above highest obstruction on roof.
- Ensure mounting height will not be obscured by average snowfall accumulation.

Note: Obstructions around the photo sensors will affect the performance of the system.

Step 2: Prepare and Install the Mast

Install the mast per IMT/RMT support requirements and local building codes.

Step 3: Routing the Ethernet Cable

Pull the Ethernet cable through the installed mast from the system network, allowing 6 inches of cable beyond the mounting pole opening for connection to the Ring Photo Sensor.

Step 4: Mounting the Ring Photo Sensor

Tools needed for installation
- Flathead screw driver
- Loctite Silicone adhesive (included in shipping box)

1. Detach side cover of the Ring Photo Sensor by removing the 4 screws securing the side cover to the sensor.
   - The side cover retaining cable will allow the cover to hang below the sensor while completing the mounting process.
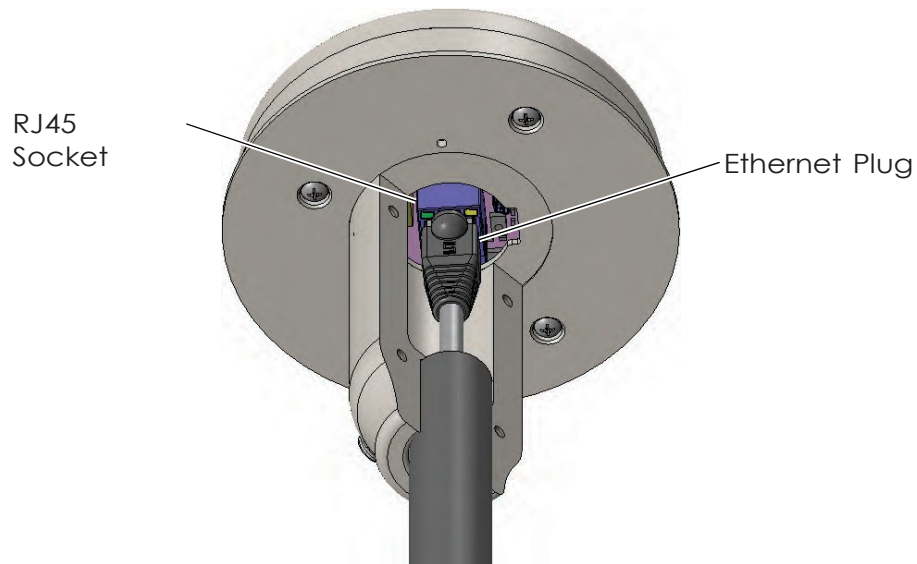

Side Cover Screws
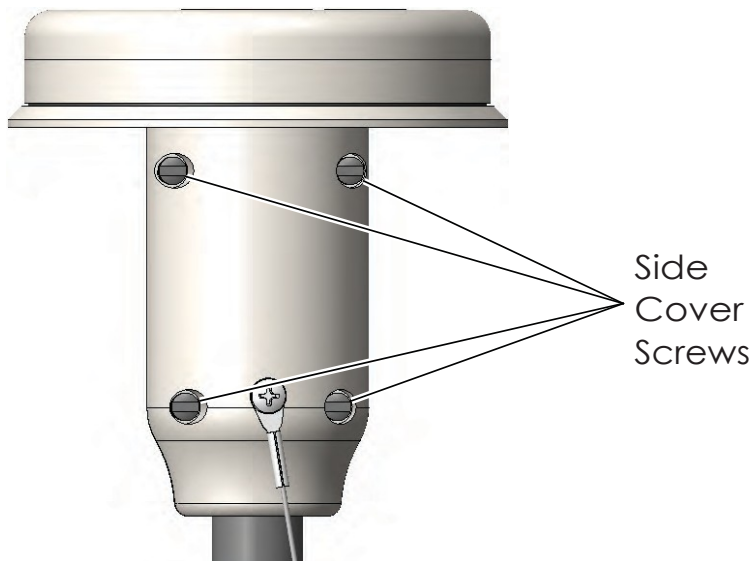
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2. Position sensor onto the mast as shown below, with the mast fitted into the semi-circular recess designed to hold it in position.

Mast Inserted into Sensor Recess
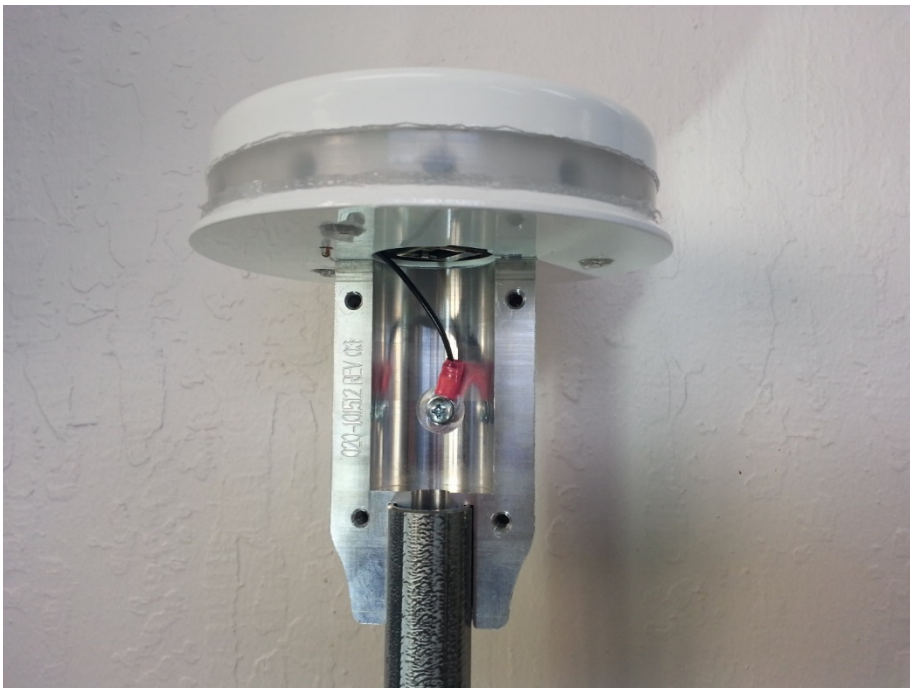
3. Plug the Ethernet cable end from the mast into the RJ45 socket in the Ring Photo Sensor as shown below

RJ45
Socket   Ethernet Plug

4. Verify sensor connectivity as shown by the blinking LEDs on the Ethernet connector.
    •   The sensor obtains an IP address using DHCP.

5. Reattach the side cover and secure by tightening the 4 side cover screws.
   - Apply a ¼" bead of Loctite Silicone adhesive to all mating surfaces of the side cover.

Attach side cover back to the Ring Sensor body and tighten the screws.

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6. Secure the installation by tightening the mounting screw enough to hold the sensor securely in place. Do not overtighten the mounting screw.
    - Note the MAC address on the cover formatted as 60:84:3B:xx:yy:zz – View's IEEE OUI is 60:84:3B, and the remaining 3 octets (xx:yy:zz) are specific to each sensor (e.g., 60:84:3B:44:33:11).
    - Side cover retaining cable on top screw not shown in rendering

Mounting Screw