

# KOONTZ-WAGNER REVOLUTIONIZES PREVENTIVE MAINTENANCE WITH ULTRASOUND



## ABOUT KOONTZ-WAGNER

Founded in 1921, Koontz-Wagner Services is a leading electromechanical facility solutions provider specializing in the industrial and institutional markets in the Midwest and beyond. While their primary focus is rebuilding and repairing motors, Koontz-Wagner also has the expertise to provide complete electrical and mechanical design, installation, and preventive maintenance services in any environment, large or small, routine or complex, in many different industries.

In this case study, we will be discussing one of Koontz-Wagner's clients who had recurring electrical issues.

## THIS CUSTOMER WAS EXPERIENCING ELECTRICAL ISSUES

Every six months, Koontz-Wagner performs routine infrared (IR) inspections. One customer reported experiencing electrical issues inside the motor control center of their facility but couldn't locate or diagnose the problem. The equipment wasn't running up to its usual standard. Typically, Koontz-Wagner uses IR technology for these inspections. However, the IR scan was unable to identify any electrical faults. Determined to find the root cause of the electrical problems, they decided to implement an additional technology: ultrasound.

## KOONTZ-WAGNER USES THE ULTRAVIEW CAMERA (SI124) FOR ENHANCED ELECTRICAL INSPECTIONS

Koontz-Wagner recently purchased an UltraView Camera (Si124) from UE Systems, and this electrical issue provided them with the perfect opportunity to test it. This camera allows them to scan electrical equipment and detect partial discharge from safe distances. Unlike IR technology, the UltraView Camera (Si124) can easily detect issues such as corona, tracking, and arcing. By simply pointing the camera at an electrical asset, partial discharge locations, if present, are displayed on the screen in real time, allowing inspectors to identify problems early.

With the UltraView Camera (Si124), inspectors have saved money by detecting and locating electrical faults early, avoiding costly downtime and ensuring the safety of personnel.

# THE POWER OF ULTRASOUND IDENTIFIED PARTIAL DISCHARGE MISSED BY IR TECHNOLOGY

It didn't take long for the UltraView Camera (Si124) to locate partial discharge on a 12k transformer that IR technology had missed. The customer's hunch was correct – partial discharge was present in the motor control center. The benefits of early detection proved incredibly valuable. A repair plan was put in motion that prevented further damage and minimized downtime.

The ability to perform partial discharge scans from a safe distance is a great benefit. Other features of the UltraView Camera (Si124) that impressed the inspectors at Koontz-Wagner are its ability to easily detect faults, capture a snapshot with audio, and create reports with a description of the severity of the partial discharge.

*„The UltraView Camera (Si124), combined with its friendly and intuitive software, allowed us to identify and locate an electrical fault that would have otherwise gone unnoticed. Utilizing the power of IR and ultrasound technology together has been a very effective way to ensure our customers are running at optimal efficiency after our inspections.“*

Jeff Mott, Koontz-Wagner

Moving forward, The UltraView Camera (Si124) allows Koontz-Wagner to offer both IR and ultrasound technologies to their customers. This dual approach enhances their ability to detect and address electrical issues early, reducing the risk of safety hazard, unexpected failures, and costly downtime while maintaining the reliability of their customers' equipment. Combining these two technologies ensures comprehensive and thorough inspections, providing their customers with a greater peace of mind.

## QUICK REVIEW

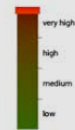
- Koontz-Wagner provides its customers across several industries with **comprehensive preventive maintenance services using only infrared (IR) technology.**
- One of their customers reported consistent electrical issues inside their motor control center, but **their routine IR inspection couldn't identify any problems.**
- Koontz-Wagner purchased and implemented the **UltraView Camera (Si124)** which quickly identified partial discharge on a 12k transformer.
- Catching this issue early afforded Koontz-Wagner the **ability to plan and schedule a full repair before experiencing catastrophic shutdown or unsafe working conditions.**
- Moving forward, Koontz-Wagner will utilize **the power of both IR and ultrasound technologies to ensure their customers are receiving the most up-to-date and thorough electrical inspections possible,** providing them with greater peace of mind.

SUB US-A2-3

Acoustic Camera Report  
18.7.2024



### Severity



**Description**  
This is classified as a surface or internal discharge. The discharge appears to be strong and might rapidly escalate to complete insulation breakdown.

**Recommendation**  
Immediate action. Visual inspection. Clearing of polluted surfaces. Repair or replacement of the components.

### Properties

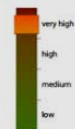
|              |                                  |
|--------------|----------------------------------|
| Level        | 45.7 dB                          |
| Date created | 18.7.2024                        |
| Device       | AC13U267                         |
| Device Label | AC13U267_00351_240718_10_03_0351 |
| Distance     | 10 ft                            |
| Voltage      | 12.47 kV                         |
| Location     | transformer                      |

SUB US-A1-1

Acoustic Camera Report  
18.7.2024



### Severity



**Description**  
This is classified as a surface or internal discharge. The discharge appears to be strong and might rapidly escalate to complete insulation breakdown.

**Recommendation**  
Immediate action. Visual inspection. Clearing of polluted surfaces. Repair or replacement of the components.

### Properties

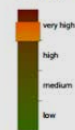
|              |                                  |
|--------------|----------------------------------|
| Level        | 29 dB                            |
| Date created | 18.7.2024                        |
| Device       | AC13U267                         |
| Device Label | AC13U267_00350_240718_09_44_0350 |
| Distance     | 10 ft                            |
| Voltage      | 12.5 kV                          |
| Location     | transformer                      |

SUB US-B1-3

Acoustic Camera Report  
18.7.2024



### Severity



**Description**  
This is classified as a surface or internal discharge. The discharge appears to be strong and might rapidly escalate to complete insulation breakdown.

**Recommendation**  
Immediate action. Visual inspection. Clearing of polluted surfaces. Repair or replacement of the components.

### Properties

|              |                                  |
|--------------|----------------------------------|
| Level        | 25.1 dB                          |
| Date created | 18.7.2024                        |
| Device       | AC13U267                         |
| Device Label | AC13U267_00348_240718_09_29_0348 |
| Distance     | 10 ft                            |
| Voltage      | 12.47 kV                         |
| Location     | transformer                      |