

THERMOGRAPHY

Thermography of Electrical Panels



Property Damage Restoration



Temporary Humidity Control



Property Damage Prevention



APPLICATION

Overview

Electrical circuits are subject to deterioration and over time faults will occur if not detected. Most problems are preceded by a change in thermal characteristics and temperature, whether hotter or cooler. As the electrical current flows through a circuit, heat is generated due to the internal resistance of the components. This will mean that over time the amount of heat will increase as the contact surface of the circuit weakens, ultimately leading to power failure or in some cases fire.

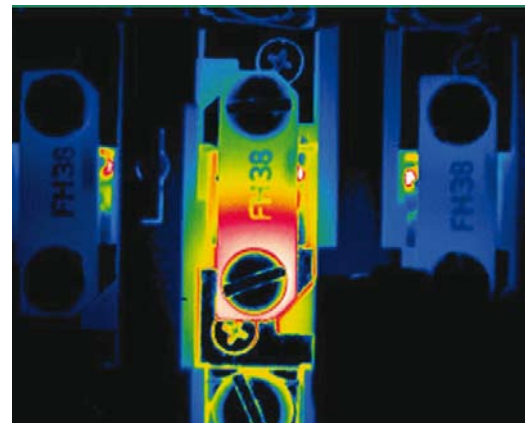
Global damage and restoration company, Munters have developed a highly effective, non-destructive method for conducting electrical checks using Infrared thermography. All Munters technicians are qualified having passed infra-red thermography courses at level one and two qualifications.

Infra-red thermography is an accurate, cost-effective and non-invasive method designed to measure temperature or excessive heat build-up. It has been used for many years as a tool to aid engineers and maintenance personnel in detecting loose connections, over-loaded or damaged components, poor wiring and a host of other potential defects, when conducting routine inspections.

Using infra-red cameras to detect differences in heat emissions, Munters are able to identify areas and/or components that are running in excess of their power specification and therefore susceptible to failure. The combination of proven techniques and trained technicians allow Munters to achieve the best possible thermography results.

Munters recommend at least one survey per year to detect and help monitor areas of concern. Once the thermal camera has detected the differences in temperature, further investigation may be required when the equipment is off-line in order to determine the actual cause of the problem.

The electrical industry understand the importance of different temperatures on individual components and know that this is an excellent indicator to the operating conditions and hence reliability and longevity of the electrical system.



An electrical circuit running over capacity.



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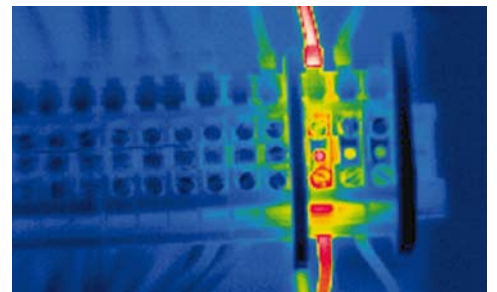
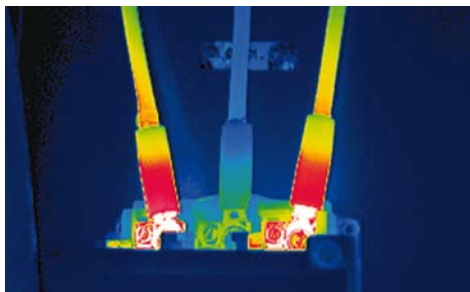
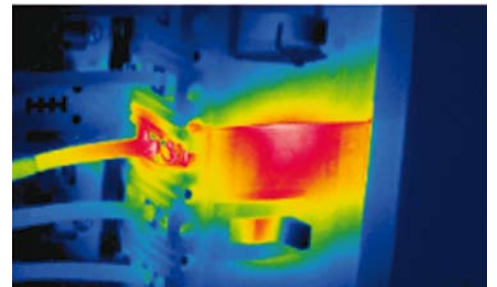
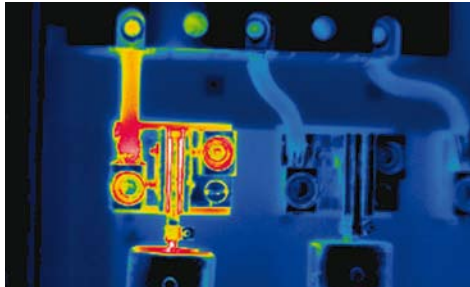


PROCEDURE

The thermal camera requires a direct line of sight in order to obtain a true reading, so prior to the survey all obstructions is removed. In addition, it is necessary for Munters to undertake the survey while equipment is running under the normal load, to allow the most accurate assessment performed.

Using a thermal camera a qualified technician will complete as assessment of a circuit to identify any potential, or current, issues including overloaded circuits, loose electrical connections and faulty wiring.

Following the survey a full and detailed report will be issued including digital and thermal images, along with recommendations. It is this information that the customer is able to use to make an informed decision about the most appropriate further action to take.



Thermography identifies the potential hazard as red in the image.

RESULTS

Munters' range of thermography services detect potential problems not visible to the human eye and are therefore able to provide customers with a safe environment by ensuring that electrical panels and circuits are in good working condition and not prone to problems such as power failure or fire.

BENEFITS

- Cost savings, as components are repaired prior to major failure
- Non-destructive method
- Reduced shut down period through planned maintenance reducing disruption to the running of your business
- A more efficient repair
- Reduced impact on the environment
- The ability to note areas of potential concern and monitor areas of deterioration via an annual inspection
- The provision of a predicted maintenance programme.



Non-destructive, thermography enables more efficient repairs.

