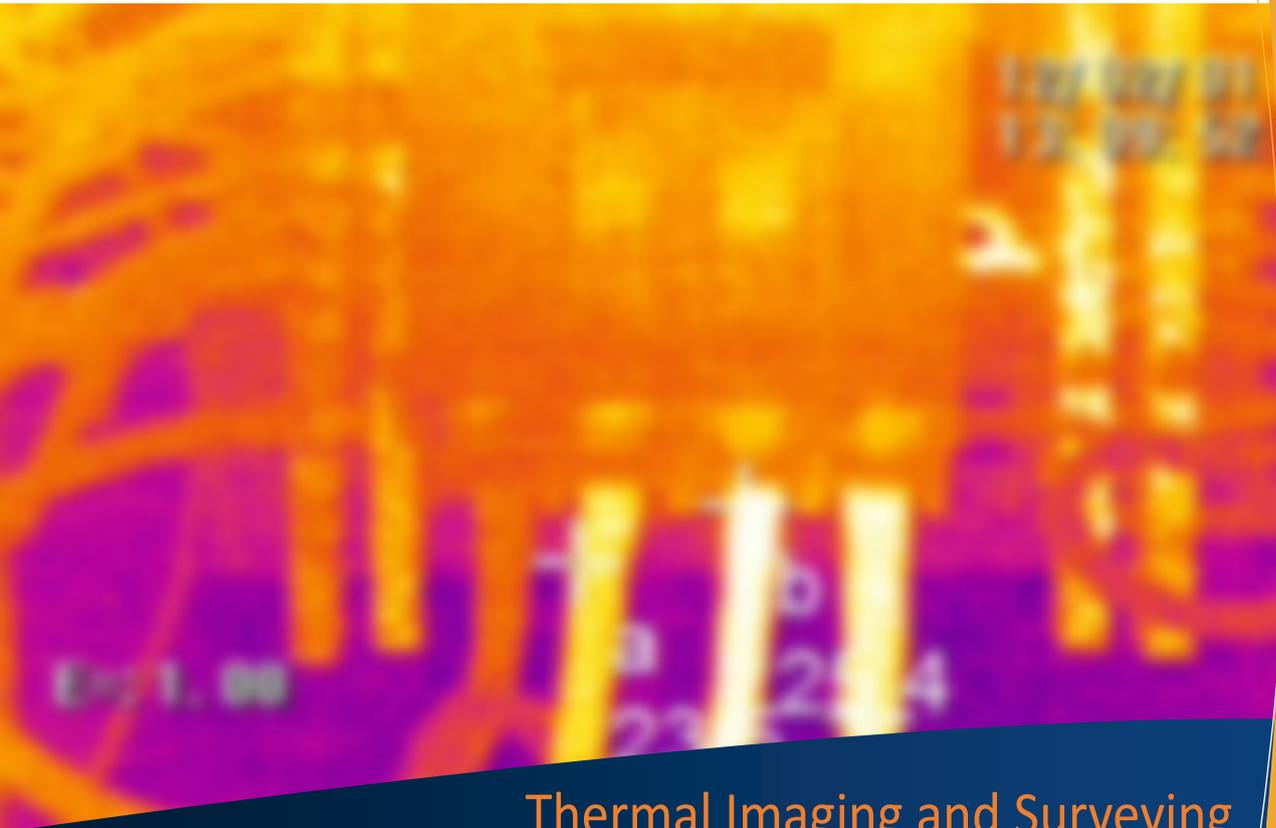


DataTrak™



## Thermal Imaging and Surveying



- pat testing
- fixed wire testing
- thermal imaging**
- asset tracking
- it audits
- energy audits
- risk assessments
- dse assessments
- cable management
- pat training
- asset management software
- it auditing software
- pat hardware
- labels & accessories

# A valuable diagnostic tool

## WHAT IS THERMAL IMAGING?

Thermal imaging is one of the most valuable diagnostic tools for predictive maintenance. By detecting anomalies often invisible to the naked eye, thermography allows corrective action to be taken before costly system failures occur.

Thermal Imaging or Thermography is the process of using a special camera designed to look only for heat by way of infra red (IR) energy waves.

A regular programme of thermal imaging as part of routine maintenance can highlight potential problems long before any event.. As a result any required repairs can be planned for in terms of both time and budget. In short, it is an invaluable resource for predictive maintenance.

## ELECTRICAL INSPECTIONS

Thermal Imaging is commonly used for electrical inspections. As electrical connections become loose, there is a resistance to current that can cause an increase in temperature. This increased temperature can then cause components to fail, potentially resulting in unplanned outages and injuries. In addition, the efficiency of an electrical grid becomes low prior to failure, thus energy is spent generating heat, causing unnecessary losses. If left unchecked, heat can rise to a point where connections melt and break the circuit; as a result, fires may occur.

Besides loose connections, electrical systems suffer from load imbalances, corrosion, and increase in impedance to current. Thermography can quickly locate hot spots, determine the severity of the problem, and help establish the time frame in which the equipment should be repaired.

Thermography is very useful when inspecting indoor components such as motor control centres, breaker panels, disconnect switches and transformers. Another key benefit of thermography is the ability to perform inspections while electrical systems are under load.

As thermography is a non-contact diagnostic operation, the test engineer can quickly scan a piece of equipment from a safe distance, leave the hazardous area, and return to a safe place to analyse the data without ever putting himself in harms way.

## WHY DO I NEED TO CARRY OUT THERMAL IMAGING?

The Electricity at Work Regulations of 1989 places a "duty of care" on employers and landlords to maintain electrical systems to prevent danger where otherwise it may exist. In many cases traditional inspection and test work is not feasible; where supplies are impossible to isolate such as hospitals, prisons, factories etc. Whilst it is imperative to carry out as much inspection and test work as possible, thermal imaging is an effective way of determining the presence of potential problems within the electrical distribution system without the need to isolate circuits. Images can be taken of key connections and switch-gear and along with visual inspections and live testing can form a means to meeting your obligations under legislation.

## WHO IS RESPONSIBLE?

Realistically, everybody has a duty to ensure the safety of others whilst at work; however, the Duty Holder will have ultimate responsibility for electrical safety. If nobody at your place of work is clear on who that is, then the responsibility falls on the most senior person. It is important to know who has the responsibility for safety and welfare of staff in order to establish that compliance is achieved.

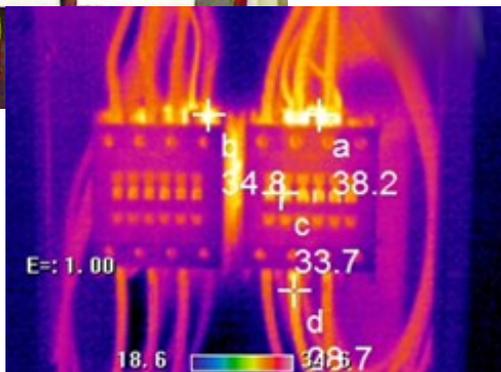
## WHAT DOES IT INVOLVE?

Thermal Imaging involves an Engineer visiting your premises armed with a powerful camera that uses infra-red technology to detect heat. Most electrical parts that are damaged or ready to fail will generate heat; the camera will detect excessive heat in relation to the ambient temperature which will alert



## WHY USE US?

- years of experience
- reliable and convenient service
- City and Guilds qualified engineers
- £10 Million public liability insurance
- ISO9001 registered
- British Safety Council members
- Safe Contractor approved
- Government Trust Mark endorsed
- concom registered
- Full Inspection report and data provided





the engineer to a potential problem. The engineer will be trained to recognise whether the heat is sufficient to warrant further investigation, upon which the client will be notified. Generally speaking, thermal images can be taken by simply removing the cover or barrier to a piece of electrical distribution equipment, and does not require isolation.

#### WHO SHOULD DO THE WORK?

It is vital that this type of work is carried by a qualified and experienced test Engineer. Such Engineers are generally fully qualified electricians who have experience of test and inspection, and have been trained and specifically qualified in thermal imaging work. When selecting your contractor, you should ask to see evidence of their qualifications and experience in this type of work.

#### WILL IT IMPACT ON MY WORKPLACE?

In theory there should be no impact whatsoever other than an Engineer being present on site visiting each key electrical location. Providing you communicate with the engineer and provide access to each location, there will be no impact and your business will not be affected.

## Complete peace of mind - at an affordable price

#### WHAT WILL I RECEIVE?

Upon completion of a thermal imaging survey you will receive a report that details the following:

- Installation details and characteristics
- Schedule of items tested and inspected
- A thermal image and standard digital image of piece of equipment surveyed
- Recommendations for any further investigation required along with an explanation.

If you are not a technical person, we will be pleased to talk through your report with you and advise you of any further action required.

#### HOW MUCH WILL IT COST?

Unlike a lot of companies we base our charge according to your specific site. Contact us for a free no-obligation quote.

#### WHAT COULD HAPPEN IF I DON'T DO IT?

There are many reasons not to do electrical testing and inspections, such as cost, inconvenience, or lack of knowledge. However none of these reasons will be accepted as a defence in the event that an accident or fire occurs. Aside from the threat of prosecution in the event of injury or death, many insurance companies now require thermal imaging to be done on a regular basis.



#### Qualified engineers

All engineers are trained to a high standard and achieve City & Guilds qualifications in the appropriate subjects where appropriate.



#### Trusted and Professionally Accredited

We are:

Government Trust Mark endorsed  
ISO registered and certified  
A member of the British Safety Council  
Safe Contractor Approved  
Concom registered  
Fully insured with £10 Million liability cover



#### Electronic Reporting

All documentation is provided electronically to ensure you receive your test results as quickly as possible - it also helps the environment by saving paper, electricity and carbon emissions from vehicles used to deliver post.

PAT TESTING

ASSET TRACKING

FIXED WIRE TESTING

MANAGEMENT SOFTWARE

AND MORE

The DataTrak Head Office is located in Milton Keynes. Our engineers, however, are located around the UK - hence our nationwide service.

Although a relatively young company, the Board and Senior Management of DataTrak can offer a wealth of experience in facilities management, software design & development, IT management and providing service to customers.

We offer not only a range of quality services and products but also a very competitive pricing structure. Our Company policy though is simple - a total commitment to quality customer service at all levels.

Safety is a core value of our company. All DataTrak people, from leadership down to everyone in the field, personally challenge the notion that injuries will occur and hold the conviction that every accident is preventable. That's why our safety performance is second to none.

Our Customer base straddles the whole spectrum of commerce and industry - both private and public. For a number of years DataTrak has been recognised as a leader in our field. We are proud of our past but are looking to the future.

©Copyright 2012 DataTrak Ltd

Version 12.3a

DataTrak™



DataTrak Ltd

Ground Floor, 7 Furzton Lake  
Furzton, Milton Keynes  
Bucks, MK4 1GA

+44 (0) 1908 410790 ph

+44 (0) 1908 410791 fax

[www.datatrak.ltd.uk](http://www.datatrak.ltd.uk)

