

# RM Insight<sup>®</sup>

## Infrared thermographic scanning

All businesses from administration to industrial services rely on a secure electrical supply to carry out their everyday operations. A faulty electrical supply can result in down time and loss of production, and in some cases even spark a fire and present a risk to employees.

It is recognised throughout the insurance and fire protection industries that electrical failure is one of the most common sources of fires within commercial buildings, with early detection many of these fires are preventable.

Infrared thermographic scanning (ITS) works by measuring infrared heat in reference to ambient temperature. From this a trained operator can determine when a device is working within an acceptable and safe working temperature. ITS is commonly used to detect: Overloaded circuits, loose connections, phase imbalance, faulty electrical and electronic components, bearing temperatures and motor winding temperatures. ITS devices range from simple pointing devices that display a temperature along a scale to thermal imagers which produce high resolution colour images.



While ITS is quite often used for detecting electrical abnormalities it can also be used as a condition monitoring tool for electrical motors and mechanical bearings.

### The benefits of ITS

#### Improved safety and loss control

Early detection of faults reduces the risk of personal injury, death or significant property loss.

#### Reduced outage costs

Locating the problems prior to failure greatly reduces un-scheduled outages, associated equipment damage and down time. The cost of an emergency outage is significantly greater than planned maintenance.

#### Improved and less expensive maintenance:

- ▼ precise pinpointing of problems minimises time required for preventative maintenance
- ▼ maintenance efforts directed to corrective measures rather than looking for the problem
- ▼ repair only what requires repairing, reducing repair time and replacement of good components.

#### Reduced operational costs

With the system up and running for longer periods of time, the reduction and improvement of inspections, maintenance, spare parts inventory and outages will reduce the overall cost of operations.

### Testing

It is important that ITS is performed by a certified operator who is either an electrician or accompanied by an electrician. An infrared thermal scan should result in a written report which includes the site location and date of inspection with images showing all scanned devices, faults and recommendations for dealing with any faults found. A complete scope of works can be found on the Australian Professional Thermography Associations (AUSPTA) website – [auspta.asn.au](http://auspta.asn.au) or by contacting Vero Risk Engineering.

For more information:  
[www.vero.com.au/vero/business-insurance/risk-management](http://www.vero.com.au/vero/business-insurance/risk-management)  
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