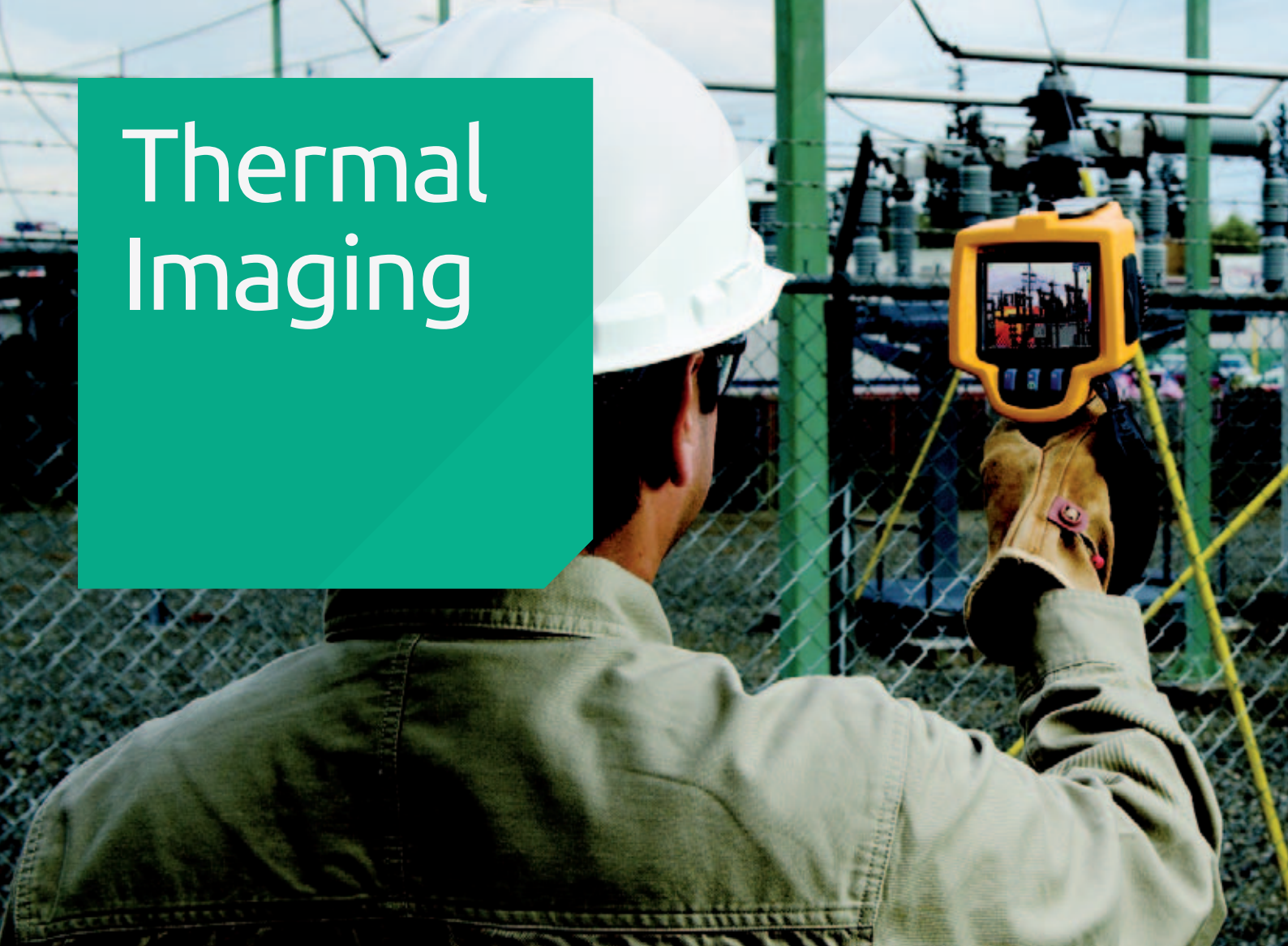


# Thermal Imaging



## What customers say about Livingston

“We use Livingston as it offers us a one-stop shop where we can take care of all our test equipment sourcing requirements.”

THOMAS HARVICK - PROCUREMENT MANAGER

“Livingston’s technical and application support staff are always able to help me with my queries.”

GERARD WHITE - CONTRACT ENGINEER

“I must have different instruments to meet the needs of different assignments. Livingston’s range means I can find exactly what I want and hire it straight away.”

TONGHI-HU - PROJECT MANAGER

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**Livingston**  
test equipment rental

## THERMAL IMAGING

Thermal Cameras can be employed in a wide variety of industrial, building and product development applications. They use Infrared light wavelengths which are invisible to the human eye, but can detect differences in Infrared radiation from objects.

Thermal imaging equipment adds a whole new dimension to test activities. It can reveal problems that simply could not be seen with the human eye and so offers far greater value to engineers than relying solely on visual inspection.



Hotspots often signify where various forms of operational failure are occurring – these can include poor electrical connections, mechanical misalignments, discontinuities in insulation,

overheating of motors and overloading of pumps, as well as leaks or blockages in pipework. In addition, thermal imaging can be used for quality control on production lines, mould inspection, weld inspection, non-destructive testing, tank level monitoring, flare detection and general improvement of system designs.

Important aspects to consider when specifying a thermal imaging device are what resolution is needed for the particular job (the greater the number of pixels available, then the sharper the images that will be produced)

and whether the thermal sensitivity is sufficient (the higher this is, the better the image quality will be, as a larger number of different temperature values can be discerned). A broad operational temperature range will often be desired as this will result in a large spectral band over which analysis can be performed.

Many modern thermal imaging are supplied with free of costs software packages enabling the user to easily import the results into professional reports. The non contact method of measuring temperature is an important safety consideration which makes thermal imaging a powerful tool in preventive maintenance applications such as the examination of heavily loaded electrical systems. Picture in picture (PiP) features, which show an infrared image and a true image are ideal for comparing and identifying specific objects and areas. Some cameras even have GPS location recording for large area outdoor surveys such as switch yards. Livingston offer a wide range of thermal cameras from easy to use point and click models to sophisticated state of the art cameras for research and broadcast use.

### What engineers can expect from Livingston:

- › Access to latest cable testing technology
- › Optical & electrical cable test solutions
- › Single source for all required test items
- › Selection across a wide price range
- › Professional helpdesk
- › 24 hours delivery time

## FLIR B335



### specifications

Infrared image resolution range: 320 x 240 pixels

Measurement Range: -20°C to +350°C

Sensitivity: 50mK

High quality visual camera 3.1Mpixels

## FLIR P660



### specifications

Image resolution 640x480

Large high resolution 5.6" flip-out LCD

Built-in 3.2 Mpixel digital camera with target illuminator

High Temperature Option to 2000 °C included

## FLIR I60



### specifications

Digital Camera – 2.3 Megapixels with built-in LED lights provides sharp images

Picture in Picture (PiP) – Displays resizable IR image super-imposed over a digital image

Wide Temperature Range – Measures from -20 °C to +350 °C targeting electrical and industrial applications

## FLUKE TI25



### specifications

-20 °C to 350 °C Temperature Range

Full Picture-in-Picture and full screen IR

Storage 3000 .bmp IR images / 1200 .IS2 IR-Fusion images to a 2GB SD Card

Voice memo recorder

## TESTO 875



### specifications

Temperature measuring range: -20...+280°C

Refresh rate 9Hz

Automatic hot / cold spot recognition

High thermal sensitivity (NETD):<80mK

## FLUKE TI32



### specifications

Temperature Range -20 °C to +600 °C (-4 °F to +1112 °F)

Temperature Accuracy ± 2 °C or 2 % (at 25 °C nominal, whichever is greater)

Thermal sensitivity (NETD) ≤ 0.05 °C at 30 °C target temp. (50 mK)

Infrared spectral band 7.5 µm to 14 µm (long wave)

## Wide range of Test Instruments now available

By using Livingston as supplier for your test and measurement instrument you will have access to a wide range of different instrument. The rental inventory of Livingston contains over 5.000 different instruments over a wide range of technologies. From basic temperature measurement

instrument to very sophisticated high frequency spectrum analysers. Livingston supply all instrument with a complete package of accessories, a manual and a valid calibration certificate. Ready to use.



Check our online catalogue for all available instruments and actual rental prices:  
[www.livingston.com](http://www.livingston.com)

### Rental, the smartest way to source your equipment:

- › No hidden costs
- › No capital expenditure or investment necessary
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- › Pay-as-you-go
- › Try before you buy
- › Technology refreshment
- › Lead-time bridging
- › Rental Replacements
- › Avoid disposal costs liabilities

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