SERVICES

CIM Thermo

High resolution preventive and predictive maintenance

CRITICAL POWER

socomec
Innovative Power Solutions

An independent manufacturer

The benefit of a specialist

3,500 m²
of test platforms

One of the leading independent power testing labs in Europe

50,000
on-site interventions per year

Nearly 400 experts in commissioning, technical audit, consultancy and maintenance

10 %
of turnover invested in R&D

Always at the cutting-edge of technology for innovative, high-quality products

MADE IN EUROPE

ENERGY SPECIALIST since 1922

THE GLOBAL COMPACT
WE SUPPORT

Thermal technology for precision monitoring of your electrical installation

The CIM thermo service involves checking the components of your electrical installation using special equipment (thermal imaging cameras). In this way it is possible to perform a preventive diagnosis of breakdown risks by analysing the temperature (thermographic control) of components including:

- transformers,
- electrical switchboards,
- power factor correction systems,
- distribution cables,
- joints,
- connections,
- terminals,
- clamps,
- protection devices, isolators, fuses, circuit breakers,
- UPS and converters,
- batteries,
- loads (motors and actuators, lighting).

Expert servicing by certified specialists

Socomec technicians are specially trained and certified, and operate in compliance with standards and procedures established by international authorities.

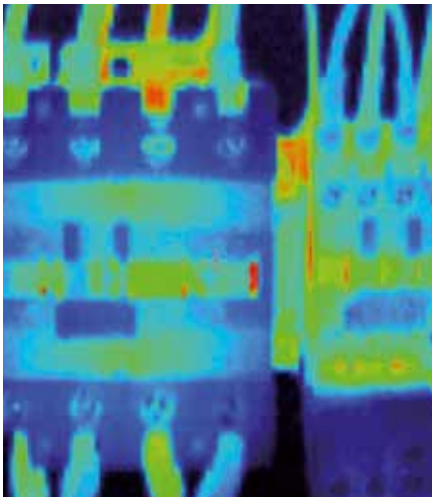

APPLI 193 A


DEFYS 114 A

A preventive diagnosis service from a specialist manufacturer

A comprehensive thermographic diagnostic service for uninterruptible power supply systems (distribution and components)
Maximising the overall effectiveness of an installation means above all optimising its availability by increasing its reliability (MTBF, mean time between failures) and reducing repair times (MTTR, mean time to repair). Using thermography it is possible to check active installations and rapidly identify critical situations affecting energy distribution and electrical components (loose or corroded connections, load imbalance, overloads, presence of harmonic currents).


CIM 008 A


CIM 009 A

Infrared thermography

Thermography, also known as thermal imaging, is a technique which involves the detection of infrared radiation produced by warm objects.

Infrared cameras are used to detect and photograph this radiation, thus enabling an object's temperature to be analysed in a non-invasive way and with a high level of precision (to 1/10th of a degree).

APPLI 195 A

Infrared thermographic camera

The particular model of camera used by our technicians to inspect components can store images and sequences for comparison during future checks.
The camera identifies critical components that require immediate maintenance or simple verification.

Contract options

Socomec proposes a variety of contract plans to suit your needs :

- a general plan for the detection of faults and critical points,
- a monitoring plan for checking the effectiveness of maintenance interventions,
- periodic plans for the monitoring of critical areas.

Thermography in the electrical installation

The components of electrical installations are prone to ageing and reduced performance over time. Infrequent maintenance, poor design, vibrations, deterioration of the surrounding environment, electrical stress, breakdowns and loss of insulation are just some of the possible causes.

These impairments can affect the resistance value of the components and therefore cause them to overheat, creating a potential fire hazard.
Thermography is the only preventive diagnostic system capable of detecting this type of problem.

Application software for thermographic analyser

Thermal images are displayed using thermographic software.
By comparing the various images, customised reports can be created for further analysis.
Temperature gradients, displayed in the form of graphical images and tables, facilitate future checks and the generation of reports identifying each critical component.

Key benefits that make the difference

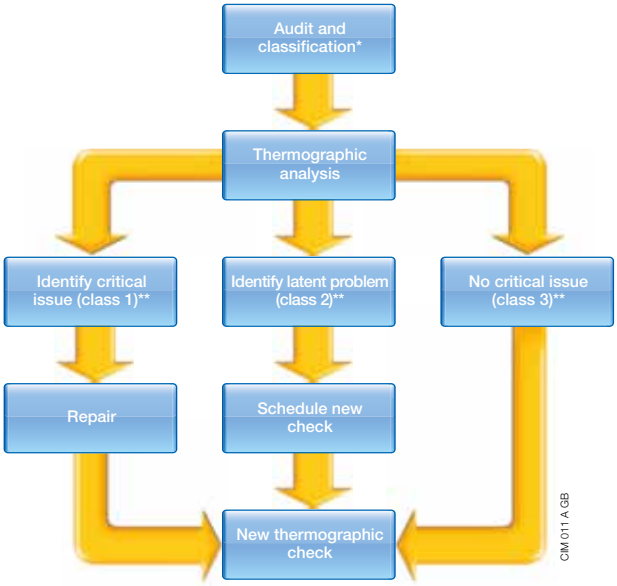
The CIM thermo thermography service offers the following advantages:

- Prevention
  - Prevention of breakdowns in the uninterruptible power supply system.
  - Highly effective diagnostics due to the control of cable connections and clamps , an operation which is impossible using conventional visual checks.
  - Maximum diagnostic reliability due to total system control, from the master distribution panel to the smallest functional details
  - Improved safety of personnel, users and customers
- Cost reduction
  - Reduction of costs incurred due to breakdowns and power loss, which are prevented by ensuring the efficiency and effectiveness of installations.
  - Reduction of costs incurred due to installation downtime.
- Uninterrupted power
  - Conveniently scheduled stop times and targeted maintenance interventions.
  - Uninterrupted power with checks carried out while the installation is in operation, without cutting off power.

Socomec proposes a comprehensive, end-to-end diagnostic service:

- Audit: visual check of the environment, installations and equipment.
- Fault finding: readings taken from the equipment using thermographic cameras to search for and quantify breakdowns.
- Solutions: identification of defective components and improvement solutions.
- Repairs: implementation of proposed solutions.
- Mesurement of results: effectiveness of applied solutions checked by comparing them with measurements taken before maintenance using a software application.
- Report: definitive technical record displaying the list of identified critical points, the state of the installation and the recommended monitoring frequency.

The *CIM thermo* service flow



(*) Load classification:
1. components with low failure probability (i.e. transformer).
2. components with negligible failure probability (i.e. low-voltage circuit breaker).
3. components with high failure probability (i.e. low-voltage contactor).

(**) Fault classification:
Class 1 (maintenance action): faults which require immediate maintenance.
Class 2 (degree of urgence): high-temperature components which must be continually monitored.
Class 3 (reinspection) : components which must be checked during the next control.

Trust the specialists

For guaranteed operational continuity

The expertise of a design manufacturer

Since 1968, Socomec has been developing quality products which aim to provide you with a high quality, secure supply of electrical energy. Our teams know what your business needs and will make full use of their expertise in fields such as electronic components, integrated circuits, operating logics and industrial software engineering.

CORPO 185 A

Expert on-site maintenance

The technicians and engineers we dispatch to service your equipment are specialists in high-quality energy sources (UPS and rectifiers). The technological know-how which enables them to repair the latest and most advanced equipment is regularly updated.

SITE 099 A

Our sales and service network

Rapid intervention wherever you are

Our European and worldwide presence ensures that you will always have Socomec specialists close to your site, for a fast and efficient response.

Respect for your environment

We realise that, as a manufacturer, we play a leading role in the protection of the environment and, as such, we are actively involved in the development of regulations and standards.
This guarantees that we will always respond to the demands of legislation concerning the disposal of used components, in full compliance with recycling procedures.

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