



CIM *Thermo*

High resolution preventative
and predictive maintenance



An independent manufacturer

The benefit of a specialist

Founded in 1922, SOCOMEC is an industrial group with a workforce of 3000 people. Our core business - the availability, control and safety of low voltage electrical networks with increased focus on our customers' power performance.



The culture of independence

The SOCOMEC Group's independence ensures control over its own decision-making, respecting the values advocated by its own family shareholders and shared by its employees.

With around 30 subsidiaries located on all five continents, SOCOMEC pursues international development by targeting industrial and service applications where the quality of its expertise makes all the difference.

The spirit of innovation

As undisputed specialists in UPS systems, mains supply changeover, power conversion and measurement, SOCOMEC dedicates nearly 10% of its turnover to R&D. As a result the Group can achieve its ambition of always being one technological step ahead.

The vision of a specialist

As a manufacturer with complete control over its technological processes, SOCOMEC is quite unlike the more general providers. The Group is constantly improving its fields of expertise in order to offer its clients increasingly customised, appropriate solutions.

A flexible manufacturing structure

Backed by two European centres of excellence (France and Italy), the Group also benefits from competitive production sites such as Tunisia and locations in the major emerging markets (India and China).

These sites have all implemented a system of continuous improvement based on Lean Management principles, and are therefore in a position to provide high levels of quality, and meet the deadlines and cost requirements expected by customers.

The focus on service

Our manufacturer's expertise naturally extends to a complete range of services designed to facilitate the research, implementation and operation of our solutions. Our service teams have built their reputation on reassuring guidance, flexible skills and reactivity.

Responsible growth

As a Group which is open to all cultures and firmly committed to human values, SOCOMEC promotes employee initiative and commitment. Working relationships are based on the idea of partnerships and respect for shared ethics. Through the company's commitment to achieving harmonious, lasting development, SOCOMEC fully embraces its responsibilities not only towards its shareholders, employees, customers and partners, but also towards society as a whole and its environment. SOCOMEC has been a signatory to the Global Compact since 2003.



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

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

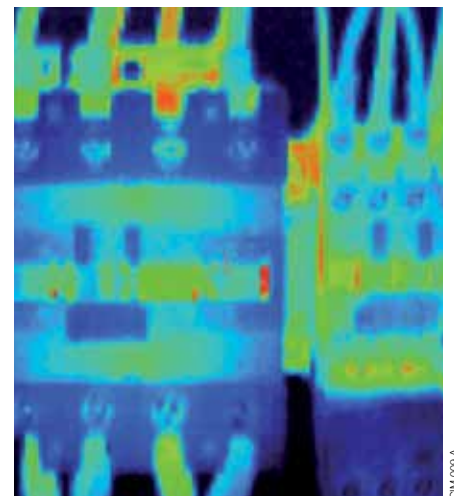


A preventive diagnosis service from a specialist manufacturer

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).



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).



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

SOCOMECS UPS 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:

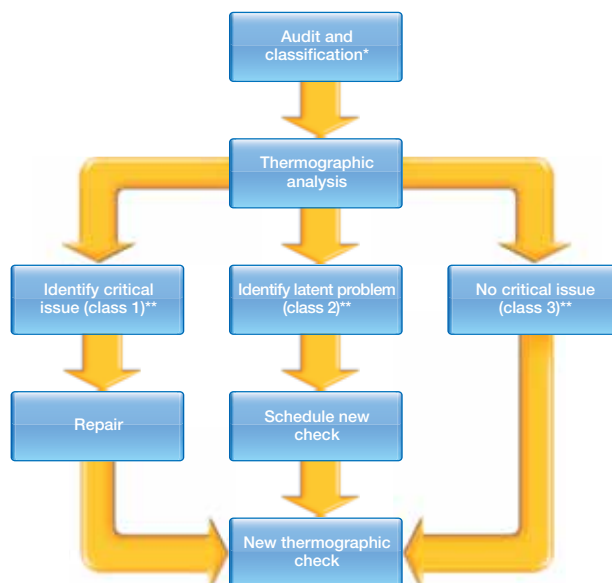
- Prevention
 - Prevention of breakdowns in the uninterruptible power supply system.
 - Highly effective diagnostics due to the control of cable connections and clamps, an operation which is impossible using conventional visual checks.
 - Maximum diagnostic reliability due to total system control, from 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.

SOCOMECS UPS 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.
- Measurement 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 urgency): high-temperature components which must be continually monitored.
- Class 3 (reinspection) : components which must be checked during the next control.

CIM 011 A GB

Trust the specialists

For guaranteed operational continuity

The expertise of a design manufacturer

Since 1968, SOCOMEC has been developing products and services which are geared towards the quality and continuity of your high quality energy. Our teams provide you with not only an understanding of your needs, but also their expertise in the areas of electronic components, DC circuits, operating logic and industrial IT.



APPLI 537 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.

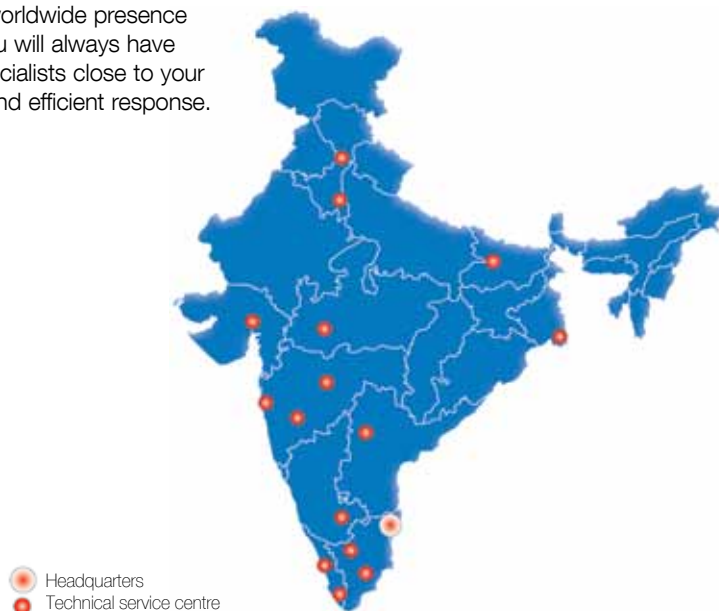


APPLI 530 A

Our sales and service network

Rapid intervention wherever you are

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



Specialist at your service

- Installation and Commissioning of UPS equipment,
- preventive maintenance,
- remedial maintenance,
- 24- hour availability,
- consultancy, design and implementation,
- installation modifications and updates.

Other services

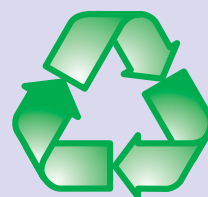
- UPS rental,
- Power Quality Auditing,
- load bank rental.

Facts about our services

- More than 75 dedicated specialists at your service,
- proven ability to execute over 32 MVA of large installations in a site,
- expertise in handling big projects in all verticals,
- certified specialists to do services such as thermography and Power Quality Auditing.

Respect for your environment

As a manufacturer, we are committed to protecting the environment and actively participate in the development of legislation and standards related to this issue. This guarantees that we will always respond to the demands of legislation concerning the disposal of used components and respect recycling procedures.



Socomec worldwide



IN INDIA

CORPORATE OFFICE

SOCOMECS UPS INDIA PVT LTD
B1, II Floor
Thiru-Vi-Ka Industrial Estate
Guindy, Chennai - 600 032

CIM Sales: +91 9500056179
CIM Service: +91 9840873721

service.ups.in@socomec.com
Marketing Toll Free No. 1860 200 0808
www.socomec-ups.co.in

BRANCH OFFICES

BANGALORE

160, Arun Arch, 2nd Floor
9th Cross, Indiranagar First Stage
Bangalore - 560 038
CIM Sales: +91 9740041456
CIM Service: +91 99725 78177

COCHIN

47/590, Mattathumkattil
Narayanan Asan Road
Ponnuranni, Vyttila
Cochin - 682019
CIM Sales & Service: +91 9020148181

COIMBATORE

12, 3rd Cross Street
Lakshmiapuram, Ganapathy
Coimbatore - 641 006
CIM Sales & Service: +91 9940171003

GURGAON

504 5th Floor IMVL Building
Sector - 15, Gurgaon - 122001
CIM Sales & Service: +91 9711433154

HYDERABAD

3rd Floor
6-3-652/K/12, KAUTILYA Complex,
Somajiguda,
Hyderabad - 500 082
CIM Sales: +91 7702244265
CIM Service: +91 99594 44299

KOLKATA

AK-257, sector-2,
Salt Lake City, Kolkatta-700 91
CIM Sales & Service: +91 9903566411

MADURAI

4/294, Koil Illam, College Street,
(Opp to ULTRA College of pharmacy),
Thasildar Nagar,
Madurai - 625 020
CIM Sales & Service: +91 9940035218

MUMBAI

The Mewad Industrial Premises CHS.,
Unit No : 304, 305, 306,
E.S. Patanwala Complex,
L.B.S Marg, Opposite Sheryas Cinema,
Nr. Petrol Pump, Ghatkopar (W),
Mumbai - 86
CIM Sales: +91 9004491966
CIM Service: +91 9321330910

NEW DELHI

B-40, D.D.A. Shed
Okhla Industrial Area
Phase II, New Delhi - 110 020
CIM Sales: +91 9560811226
CIM Service: +91 9958591715

PUNE

Plot No. 30, Wireless
Co-operative Society
Behind Convergys, Aundh
Pune - 411 007
CIM Sales: +91 9923482423
CIM Service: +91 93213 30915

RESIDENT ENGINEERS

AHMEDABAD

CIM Sales & Service: +91 9376639333

AURANGABAD

CIM Sales & Service: +91 9320342700

CHANDIGARH.

CIM Sales & Service: +91 9023154784

INDORE

CIM Sales & Service: +91 9320342700

PATNA

CIM Sales & Service: +91 9903566411

TRIVANDRUM

CIM Sales & Service: +91 9020179364

IN ASIA - PACIFIC

CHINA

INDIA

MALAYSIA

SINGAPORE

THAILAND

VIETNAM

AUSTRALIA

IN WESTERN EUROPE

BELGIUM

FRANCE

GERMANY

ITALY

THE NETHERLANDS

PORTUGAL

SPAIN

THE UNITED KINGDOM

IN EASTERN EUROPE, MIDDLE EAST, AFRICA

UNITED ARAB EMIRATES

POLAND

ROMANIA

RUSSIA

SLOVENIA

TURKEY

AMERICA

LATIN AMERICAN COUNTRIES

HEAD OFFICE

SOCOMECS GROUP

S.A. SOCOMECS capital 10 951 300 €
R.C.S. Strasbourg B 548 500 149
B.P. 60010 - 1, rue de Westhouse - F-67235 Benfeld Cedex

SOCOMECS Strasbourg

11, route de Strasbourg - B.P. 10050 - F-67235 Huttenheim Cedex - FRANCE
Tel. +33 (0)3 88 57 45 45 - Fax +33 (0)3 88 74 07 90
admin.ups.fr@socomec.com

SOCOMECS Isola Vicentina

Via Sila, 1/3 - I - 36033 Isola Vicentina (VI) - ITALY
Tel. +39 0444 598611 - Fax +39 0444 598622
hr.ups.it@socomec.com

SALES, MARKETING AND SERVICE MANAGEMENT

SOCOMECS Paris

95, rue Pierre Grange
F-94132 Fontenay-sous-Bois Cedex - FRANCE
Tel. +33 (0)1 45 14 63 90 - Fax +33 (0)1 48 77 31 12
dcm.ups.fr@socomec.com

YOUR DISTRIBUTOR

www.socomec.com

