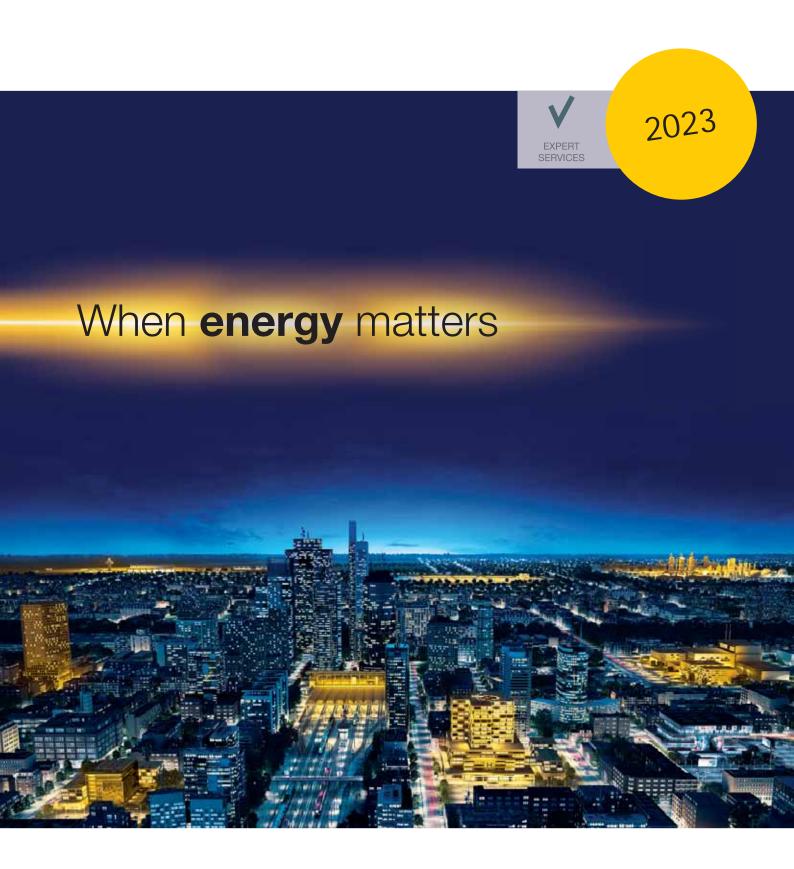
### Manufacturer maintenance and services



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Socomec Innovative Power Solutions

## Selection guide

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**Customer training** 

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- : included.
- o: optional.
- : service coverage in your area.

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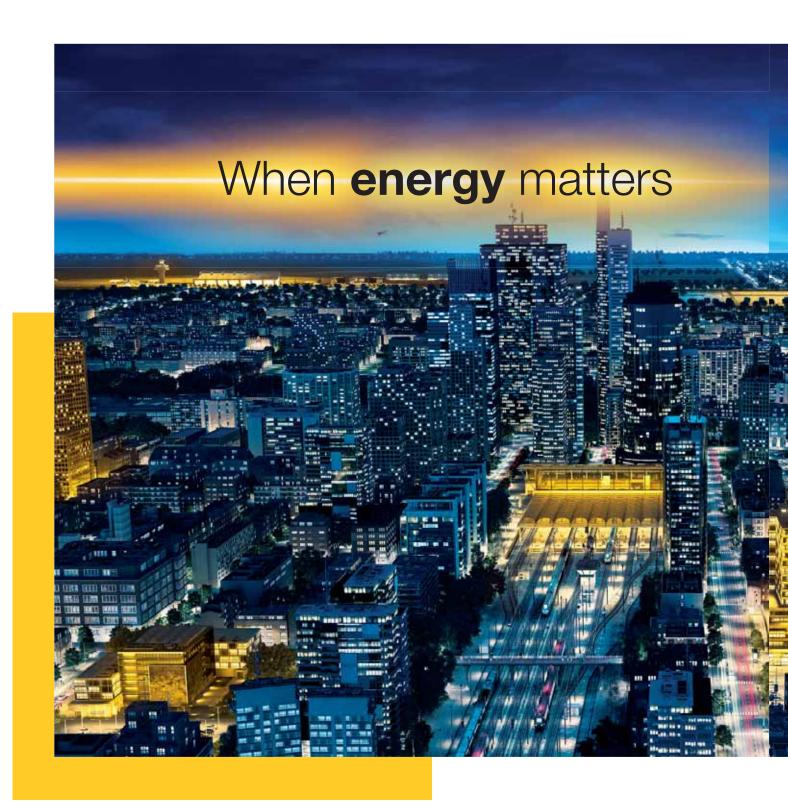
<sup>\*\*</sup>Contact us to find out which UPS ranges and models are compatible with this service.



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# Ensuring the energy performance of your installations, wherever it is critical





For more than a centenary, Socomec, a family-owned industrial group, has been designing, manufacturing and selling electrical equipments: inverters, measuring stations, energy storage, switches, automatic source switches...

With a strong expertise in critical power applications, Socomec is an innovative player in energy transition and renewable energy.

Throughout its history, Socomec has constantly anticipated market changes by developing cutting-edge technologies, providing solutions that are adapted to customer requirements and fully in keeping with international standards. Expert in electrical networks and installations performance, Socomec improve the energy efficiency of electrical installations wherever it is critical: industry, infrastructure, healthcare, data center, energy and C&I buildings. With 12 production sites, 30 subsidiaries, products and services distributed in 80 countries by more than 100 distributors, Socomec accompanies you for a more secure, flexible and efficient energy.



1 independent manufacturer

8% of turnover invested in R&D

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

3,500 m<sup>2</sup> of test platforms

One of the leading independent power testing labs in Europe

110,000 on-site interventions per year

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



## Your energy, our expertise



## Power switching

## Managing power and protecting people, equipment and installations

Active in the industrial switching market since its foundation in 1922, Socomec is today an undisputed leader in the field of low voltage switchgear, providing expert solutions that ensure:

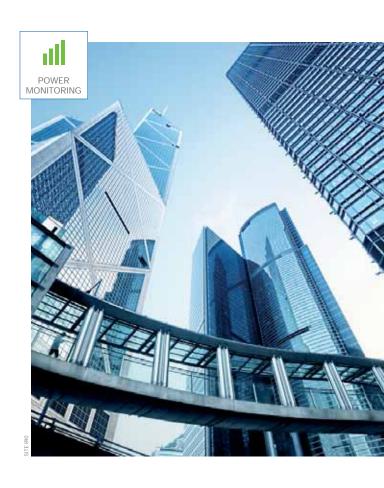
- isolation and on load breaking for the most demanding switching applications,
- continuity of the power supply to electrical facilities via manual remotely operated or automatic transfer switching equipment,
- protection of persons and assets via fusebased and other specialist solutions.

## Power monitoring

### Improving energy performance and monitoring installations

Socomec solutions - from current sensors to power meters and from IOT to energy management software - are driven by experts in energy performance. They meet the requirements of facility managers and operators of commercial, industrial and critical buildings to enable and facilitate:

- the measurement of energy consumption, the identification of sources of excess consumption and the generation of awareness amongst occupants as to their impact,
- the utilisation of the best available tariffs, utility bill checks and the accurate distribution of energy billing between consumer entities,
- the limitation of reactive energy and avoidance of associated tariff penalties,
- capacity management and the evolution of the electrical installation,
- improvements to power availability by monitoring and detecting insulation faults.





## Power conversion

### Ensuring the availability and storage of high quality power

With its wide range of continuously evolving products, solutions and services, Socomec are recognised experts in the cutting-edge technologies used for ensuring the highest availability of the electrical power supply to critical facilities and buildings, including:

- static uninterruptible power supplies (UPS) for highquality power free of distortions and interruptions occurring on the primary power supply,
- changeover of static, high availability sources for transferring the supply to an operational back-up source.
- permanent monitoring of the electrical facilities to prevent failures and reduce operating losses,
- energy storage for ensuring the proper energy mix of buildings and for stabilisation of the power grid.

## **Expert** services

## Enabling available, safe and efficient energy

Socomec is committed to delivering a wide range of value-added services to ensure the reliability and optimisation of end-users' equipment:

- prevention and service operations to lower the risks and enhance the efficiency of operations, for highquality power free of distortions and interruptions occurring on the primary power supply,
- measurement and analysis of a wide range of electrical parameters leading to recommendations for improving the site's power quality,
- optimisation of the total cost of ownership and support for a safe transition when migrating from an old to a new generation of equipment,
- consultancy, deployment and training from the project engineering stage through to final procurement,
- performance assessment of the electrical installation throughout the life cycle of the products via analysis of data transmitted by connected devices.







## Your partner in expert services

Socomec is committed to delivering a wide range of value-added services to ensure the reliability and optimisation of end-users' equipment during its life cycle

- Prevention and service operations to reduce risk and enhance equipment efficiency.
- Measurement and analysis of a wide range of electrical parameters leading to recommendations for power quality improvement.
- Consultancy, deployment and training from the project engineering stage to the final procurement stage.



#### Specialists - at your service

Our Services team comprises qualified engineers whose mission is to ensure the correct operation of your equipment. We offer a comprehensive support service package which gives you complete peace of mind: commissioning, on-site testing, preventive maintenance visits, 24-hour call out and rapid on-site repairs, original spare parts, power quality and energy efficiency audits, consultancy, design and implementation of installation modifications and updates.

Our Services team is the most reliable partner when it comes to advising you on the maintenance of Socomec equipment and providing resolution to any problems in accordance with current environmental standards and procedures.



#### **Professional tools**

Our Services team is provided with the latest essential equipment including:

- Personal Protective Equipment (protective goggles, helmet, insulated gloves, fireproof jacket, safety shoes, earplugs...),
- laptop embedded with all software required to optimise equipment performance,
- measuring equipment calibrated annually by our metrology department (multimeter, digital scope, current clamps, infra-red camera, power analyser).



#### Reports

An exhaustive report is generated for each intervention (including commissioning, preventive maintenance and troubleshooting) which is then automatically sent to the customer and synchronised with our systems.



#### Remote diagnostics

In case of any anomaly, an automatic notification is sent to a local call centre for proactive online troubleshooting.



## Availability of original spare parts

The various original parts and components that we stock guarantee that any faulty equipment can be rapidly brought back online, whilst maintaining its original performance and reliability.



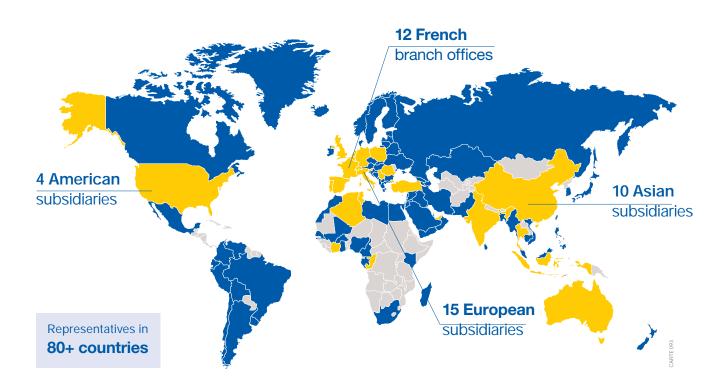
#### **Key figures**

Nearly 400 Socomec experts - supported by 200 engineers and technicians from across our distributor network - can provide the solutions to your specific needs.

Subsidiaries

Distributors

Contact us



## On-site service management



110,000

service operations per year (mainly preventive visits)

98%

Service Level Agreement compliance rate

## Technical hotline network



25+

languages spoken

3

advanced technical support centres

110,000+

incoming calls handled per year

## Certified expertise



8,000

hours of technical training undertaken every year (product, methodology and safety)







# Uninterruptible Power Supply (UPS) and Static Transfer System (STS)

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### Project consultancy

short-term UPS rental



For guaranteed high quality, uninterrupted electrical energy - where and when you need it most - Socomec UPS Rental is the ideal short-term critical power solution for rapid response deployment.

Immediate UPS availability: over 200 standard UPS across all power ranges (from 1 to 500kVA) are in-stock, ready to be fast-tracked to your site.

Flexible rental options: because every situation is unique, Socomec offers a flexible approach to rental periods, from just one week up to several months and beyond – with easy extension options.

All-inclusive solution: as the industry experts, Socomec will take care of all aspects of the UPS shipping, commissioning and maintenance – right through to removal and return transportation - making deployment quick and easy.

#### Key points

- > UPS shipped in 4 hours
- > Dedicated transport to customer site
- > UPS commissioning
- > Hot-line technical support
- > Next working day repair service
- > UPS decommissioning and removal
- > Return transport

- First choice: rapid identification of the optimum solution for your unique requirements
- > Fast delivery with express shipment
- > Flexible: rental periods available upwards of just 1 week, with easy extension options
- Safe: manufacturer standards guarantee compliance and technical performance
- > Cost effective: rental fees are tax deductible as operating expenses\*
- \* According to local tax legislation.



## Commissioning

for single-phase and three-phase Uninterruptible Power Supply (UPS)



The commissioning of a UPS covers start-up of the equipment, verification of its functions according to its design specifications, and to ensure that it is compatible with the customer's working environment.

Socomec performs the commissioning service within a quality process standard by ensuring that your equipment will be delivered in a safe, reliable and operational condition.

Innovative Power Sol	ec	PLACE YOUR CERTIFICATIO HERE		
ERTIFICATION OF	"SAFE AN	ID RELIABI	E INSTAI	LATIO
TECHNICAL SUPPORT				
HOT LINE				
UPS TYPE				
POWER				
SERIAL NUMBER				
CONFIGURATION (single/p				
COMMISSIONING DATE	(UPS)			
COMMISSIONING DATE (	Sattery)			
VALIDITY OF THE CERT	IFICATE (check	k renewal)		
SOCOMEC (www.socome for high quality and availat in case the start up and the The present certificate sho	ility supply and maintenance is	reserves the right not performed b	t to limit the re	sponsibility
* Personnel is authorised certificate released by th	e manufacturer		ed personnel	can insure

#### Key points

- > Work environment inspection
- > Electrical installation check (isolator switch, cabling, circuit breakers etc.)
- > UPS internal and external check
- > System power on and set up
- > Operating test on single UPS and/or parallel system
- > Load bank test (on request)

- > Compliance with the various installation standards
- > Completes the Factory Acceptance Test
- > Commissioning traceability
- > Conformity certificate



### Remote commissioning

#### for MASTERYS UPS from 10 to 40 kVA



The remote commissioning is a service dedicated to installers and system integrators and guarantees that UPS starts up on time.

From now on, this service allow you to benefit an easier scheduling, an operational efficiency and a better time optimisation for you and your customers.

Using an exclusive technology, remote commissioning allows expert Socomec engineers to remotely access your UPS and perform all commissioning tasks with the same level of quality, security and reliability as if they were with you in person.

#### Maximum speed and flexibility

- Quick commissioning using your mobile phone.
- Eliminate red-tape and bureaucracy.
- No more site access restrictions.
- Intervention scheduling becomes easier to manage.

#### Access to the best experts

- Remote connection to the product by certified Socomec experts.
- · Simple and fully-assisted procedure.

#### Secure and reliable commissioning

- · Highest standard protocols.
- UPS remote access via OTP code.
- On-demand encrypted connection.
- Cyber security audit by certified independent organization.

#### Reduced costs and carbon impact

- Time saving.
- More cost-effective and eco-friendly than on-site intervention.

#### **Keys points**

- Quick, remote commissioning anywhere, at any time
- > Same level of services than on-site commissioning
- > Support from certified Socomec specialists
- > Cost efficiency and lower carbon impact



## Commissioning

for STATYS Static Transfer System (STS)



The commissioning of an STS covers start-up of the equipment, verification of its functions according to its design specifications, and to ensure that it is compatible with the customer's working environment.

SOCOMEC performs the commissioning service within a quality process standard by ensuring that your equipment will be delivered in a safe, reliable and operational condition.

#### **Key points**

- > Work environment inspection
- > Electrical installation check
- > STS internal and external check
- > System power on and set up
- > Ventilation check
- > Operating test

- Commissioning performed in compliance with applicable quality and safety standards
- > Compatibility with your work environment
- > Compliance with the various installation standards
- > Conformity certificate



### Maintenance contracts

#### for single and three-phase UPS



The Maintenance service contracts are entirely tailored around customers' needs, taking into account individual operating constraints, business activity and the unique level of criticality associated with specific applications.

A variety of contracts suitable for users have been developed to cover all needs: from a simple combined service, to a fully-inclusive package that includes the cost of labour and spare parts and delivers the quickest response time to site.

SERVICE DESCRIPTION	SILVER	GOLD	PLATINUM	PLATINUM+	EVOLUTION PACK <sup>(2)</sup>
1 Annual preventive maintenance visit	•	•		•	•
Battery check	•	•	•	•	•
Battery care	0	0	0	0	0
Labour & mileage for corrective maintenance		•	•	•	•
Original spare parts			•	•	•
Power module as a spare (MODULYS XL)	0	0	0	0	
Power brick as a spare (DELPHYS XL)	0	0	0	0	
Hot-line availability	•	•	•	•	•
Emergency hot-line 24/7	0	0	0	•	•
Response time to site within next working day	•	•	•		
Response time to site within 6h <sup>(1)</sup>	0	0	0	•	•
Response time to site within 4h <sup>(1)</sup>	0	0	0	0	0
Preventive replacement of consumables (fans and capacitors, excluding batteries)	0	0	0	0	•
UPS remote monitoring (SoLink) Remote check-up + Proactive troubleshooting + Report	0	0	0	0	•
Module hot-swap on-site within 24h <sup>(1)</sup>					•
1 complete power module replacement per 5-year period (excluding batterie modules)					•
Additional preventive maintenance visit	0	0	0	0	0
Out of hours preventive maintenance visit during night, week-end, bank holidays	0	0	0	0	0
Thermal imaging	0	0	0	0	0

- ·: included.
- o: optional.
- (1) Please check the service coverage in your area.
- (2) For MODULYS GP only.

#### **Key points**

- > Original spare parts
- > Expert engineers equipped with professional tools and software
- > Safety procedures

#### **Benefits**

- > Improves system availability
- > Optimises product lifespan
- > Guaranteed response time to site

### Evolution pack summary for MODULYS GP

Evolution Pack delivers the most comprehensive service guarantee for MODULYS GP:

- > 5-year, fully inclusive package,
- > Permanent access to the latest technology,
- > Regular upgrades with complete module replacement,
- > Futureproof your system: eliminate end-of-life criticality



## Maintenance contracts

for STATYS Static Transfer System (STS)



Silver, Gold, Platinum and Platinum+ are the Maintenance service contracts suitable for standard STS.

50+ years of manufacturer's experience is at your disposal to provide you with a comprehensive support package which affords you complete peace of mind.

SERVICE DESCRIPTION	SILVER	GOLD	PLATINUM	PLATINUM+
1 Annual preventive maintenance visit	•	•	•	•
Labour & Mileage for corrective maintenance		•	•	•
Original spare parts			•	•
Hot-line availability	•	•	•	•
Emergency hot-line 24/7	0	0	0	•
Response time to site within next working day	•	•	•	
Response time to site within 6h*	0	0	0	•
Response time to site within 4h*	0	0	0	0
Preventive replacement of consumables (fans and capacitors)	0	0	0	0
Additional preventive maintenance visit	0	0	0	0
Out of hours preventive maintenance visit during night, week-end, bank holidays	0	0	0	0
Thermal imaging	0	0	0	0

<sup>•:</sup> included.

#### **Key points**

- > Original spare parts
- > Expert engineers equipped with professional tools and software
- > Safety procedures

- > Improves system availability
- > Optimises product lifespan
- > On-site interventions guaranteed

O: optional.

<sup>\*</sup> Please check the service coverage in your area.

preventive maintenance visit



The service life of equipment depends on the operating environment (temperature, humidity, dust).

To keep equipment running at maximum levels of efficiency and to avoid system downtime with possible risks and damage to loads, it is important to have the manufacturer's expertise to perform regular preventive maintenance.

This is the best way to ensure the reliability of your equipment over time and the most costeffective solution to keep the Total Cost of Ownership under control.

#### **Key points**

- Inspections: mechanical, electrical, battery
- > Dust removal / equipment cleaning
- > Software updates
- > Electronics testing
- > Environmental checks
- > Battery check\*
- > Communication test
- > Maintenance report

\*Only for UPS.

- > Helps reduce equipment malfunction
- > Optimises operating efficiency
- > Extends equipment lifetime
- > Improves system availability



emergency service 24/7



The response time to site is vital for business continuity; limiting as much as possible any downtime, in order to avoid any risk of severe system anomaly.

It is, therefore, essential to have the expertise of a maintenance service provider who fully understands your equipment, knows your working environment and who can respond to emergencies within a time guaranteed by a bespoke Service Level Agreement (SLA).

Proximity and emergency service carried out by the manufacturer are the best guarantees for fast troubleshooting and real problem solving.

#### Key points

- > Specialist team of engineers on call 24/7
- > Technical expertise on-site within 4 hours\* guaranteed
- Remote monitoring and proactive troubleshooting with SoLink
- > 24/7 original spare part stock availability with high priority shipment

\* Please check the service coverage in your area.

- > High quality technical support
- > Fast and precise diagnostic
- > Real problem solving



SoLink - Socomec experts 24/7 UPS remote monitoring



SoLink is one of the services included in a Socomec Maintenance Contract. When the application is critical, you can be assured of immediate and expert attention via SoLink. SoLink will automatically identify the anomaly and notify the nearest Socomec Service Centre when the UPS' operating parameters fall outside the permitted range - providing you with a permanent and direct connection to Socomec's expert technical team.

### Restore your systems in record time

Proactive alarm check: When your UPS alarm is activated, SoLink will instantly notify the nearest Socomec Service Centre. The supervisor technician will carry out an initial check-up by accessing the UPS dashboard on the Cloud platform.

Remote troubleshooting: In the event that more in-depth analysis is required, a Socomec expert engineer will connect to your UPS through remote access in order to run tests and diagnostic tasks directly on your machine, in complete security.

First-time-fix intervention: In the event that on-site intervention is required a Socomec on-call engineer will be dispatched immediately with a full brief from the Socomec Service Centre, along with any spare parts that may be needed.

### Improve future performance

Periodic reporting: Socomec experts will provide you a periodic UPS health-check report with event statistics, trend analysis and technical recommendations to improve overall system availability.

Interactive web dashboard: The IoT cloud-connectivity allows you access to an intuitive, interactive dashboard that gives a view of the equipment's historical data and performance trends.

**SoLive App**: Remote UPS monitoring from a smartphone – anytime, anywhere. With real-time alarm notifications and detailed status updates for each UPS, it's now possible to manage unexpected events and develop a real insight into the operating environment.

#### **Key points**

- > Effective: if an anomaly occurs, MTTR is drastically reduced
- > Secure: data is hosted on Socomec-owned cloud infrastructure, Cyber security is certified by a third-party company
- > Affordable: proposed as an optional extra on the Maintenance Contract at an attractive price



- > Prevents problems from occurring
- > Increases system availability
- > Saves downtime costs



## Optional services for maintenance contract SoLink - Socomec experts 24/7 UPS remote monitoring

#### Provide a unique user experience

#### Remote trouble shooting

Initiate problem solving in complete security

The Socomec technician is available upon request - and in collaboration with the end-user - to remotely access the UPS. This means that diagnostic tasks can be conducted in a more precise way and problem solving interventions can be initiated, as if in front of the machine.

> Direct expert access to your UPS. Root cause analysis - with no downtime. Issue detection in real-time. Remote tasks can be run within cyber security protocols.





#### Interactive web dashboard

Historical UPS data is just a click away

Verifying your UPS performance is now an innovative digital experience with the new SoLink linteractive web dashboard.

> Visualise the data history for the main operating parameters.

Select your period (hour/day/week/month/year). Choose the sampling frequency of the measurement. Zoom in on the graph to see the detail.

#### SoLive UPS

Live UPS data always in hand

While SoLink is supported by experts ready to intervene on your behalf, you can access information about the status of your UPS directly from your smartphone with SoLive UPS!

> Data provided: current UPS status, battery level, battery back-up time (minutes), UPS operating temperature.

#### Download SoLive UPS app:













remote troubleshooting problem solving securely and instantly



As soon as a problem occurs, Socomec's expert engineers are available upon request - and in collaboration with the end-user - to conduct diagnostics and root cause analysis, restoring the system in record time. The engineer connects to the UPS through remote access in order to run tests and diagnostic tasks directly on the machine - in complete security.

Problem solving interventions can be carried out with the same efficiency as if in front of the equipment.

#### Fast intervention

- Easy scheduling activity.
- Direct remote access to the UPS in order to solve issues at distance.

#### Access to the best experts

- Equipment looked after remotely by experienced Socomec specialists.
- Experts will meet precise requirements and standards as per on-site visits.

Contact us to find out which UPS ranges and models are compatible with this service.

#### Real-time issue analysis

- Remote diagnostics and tests are as effective as if in front of the UPS.
- Fast root cause analysis.

#### Reduced costs and carbon impact

- · Time saving.
- More cost-effective and eco-friendly than on-site intervention.

#### **Key points**

- > Direct access to UPS
- > Immediate response time
- > Same level of service as with on-site intervention
- > Issue analysis in real time
- > On-demand encrypted connection
- > Cyber security audit by certified independent organisation
- > Available under maintenance contract



consumables replacement



The components of each equipment are designed to operate reliably during the product's normal lifecycle, in the electrical environments and environmental conditions stated in the installation and operating manual.

To reduce the impact of ageing on your system, which could affect the efficiency and availability of the installation, it is vital to carry out the regular preventive replacement of parts subject to wear and tear such as fans and capacitors for UPS, and fans for STS, COSYS and MEDSYS products.

#### **Key points**

> Original spare parts

#### **Benefits**

- > Prevents equipment instability and malfunctions
- > Avoids risk of system breakdown
- > Saves downtime costs



Fans and capacitors must be replaced by qualified personnel only. Only Socomec personnel are authorised to make recommendations for any replacement parts.

power module as a spare for MODULYS XL modular UPS system



The addition of the Power module as a spare option to the maintenance contract of MODULYS XL will always allow to maintain the level of availability of the installation.

A spare power module will be to hand next to the MODULYS XL so that the module can be swapped in case of failure in less than 5 minutes.

The module can also be used during the preventive maintenance visit - to be inserted instead of the maintained module and therefore ensure the same level of availability.

The price is "all inclusive" and comprises:

- a maintenance slot and a spare power module rental,
- training to enable the customer to change the module by himself and avoid any problems,
- the maintenance of the spare module (spare parts and consumables).

#### **Key points**

- > Spare power module available 24/7 on customer site
- > Price all inclusive covering training in how to swap the module, module rental & its maintenance

- "Ready to use" spare power module always available on customer site
- > Ensures the same level of secured availability during maintenance operations and in case of critical failure
- No downtime during maintenance operations
- > Maintenance slot provided to test & repair the power module outside of the UPS system





power brick as a spare for DELPHYS XL UPS



Take advantage of the "Power brick as a spare" option of your service contract and maximise the availability of your DELPHYS XL UPS.

Coupled with a maintenance station, you can have a spare power brick kept in working order at all times near your DELPHYS XL.

#### Maintaining availability

With its internal redundancy, should a power brick fail the DELPHYS XL UPS will continue to operate in double conversion mode provided that the operating load does not exceed 80% of the nominal load.

#### "All inclusive" option

We provide the spare brick and maintenance station, with a Socomec expert carrying out the maintenance (including brick spare parts and consumables).

#### Minimises MTTR

When we replace and repair the faulty brick, we need no more than 30 minutes to bypass the load as we replace the brick. We can schedule in the work to suit the terms of your service contract.

#### A solution that counts as an operating expense (OPEX)

With this option, you can keep on top of your finances without impacting your cashflow.

#### **Key points**

- > Reduced MTTR
- > Operational power brick kept at the customer's site
- > Manage a complete brick rather than spare parts
- > Use this option to cover the needs of multiple machines installed at the same site
- > Socomec accepts ownership and liability for the brick

Battery care<sup>(1)</sup>



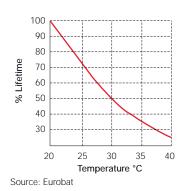
Batteries are a key element of UPS systems. Their efficiency and availability are important for preventing load downtime, but at the same time batteries are the most vulnerable and failure-prone component of such systems.

Battery failures are mainly caused by the premature "end of life" of a few battery blocks. A corrupted battery block, if not detected early and not replaced, can accelerate ageing within the rest of the battery string, therefore jeopardizing the integrity of the system.

The level of predictability for failure detection on a battery block depends on the number of measurements, tests and analyses that are performed on every single block.

Main factors for the premature end-of-life of battery blocks:

- High temperatures
- Frequent number of cycles
- · Discharge too deep
- Recharging with high voltage
- · Lack of regular maintenance



#### Key points

- > Impedance test, thermal imaging, temperature, voltage measurement block by block
- > Faulty/weak block detection
- > Back-up time measurement (optional)

#### **Benefits**

- > Information on the battery's state of health
- > Estimation of the optimum time for battery replacement
- > Optimisation of the battery's useful working life

SYDIV 268 A GB

(1) Only for UPS.

## Optional services for maintenance contract Battery care<sup>(1)</sup>

Battery Care is a brand new set of service packages that complements the standard battery check service (at string level) during the UPS

The packages will ensure the integrity of your business continuity by performing the highest level of inspection on your battery blocks.

#### Features:

preventive maintenance visit.

The Battery Care offering is designed around 3 packages: IMP (IMPedance), TEMP (TEMPerature) and PRIME (the full package).

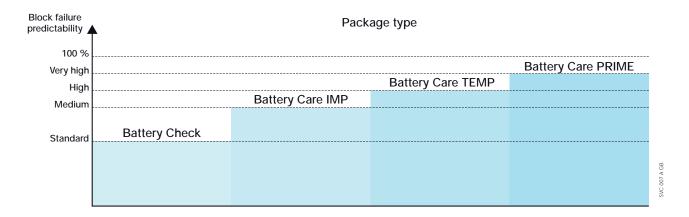
ACTIONS	WHERE	BATTERY CHECK	BATTERY CARE		
			IMP	TEMP	PRIME
Visual inspection check for leakage and corrosion	string	•	•	•	•
Cleaning	string	•	•	•	•
Measurement with partial discharge of V & I	string	•	•	•	•
Environment temperature check	string	•	•	•	•
Control of floating voltage and max current*	string	•	•	•	•
Impedance test	each block		•	•	•
Temperature measurement	each block			•	•
Voltage measurement*	each block			•	•
Thermal imaging	each block				•
Torque setting	each block				•
Back-up time measurement**	string		0	0	0

<sup>·:</sup> inclusive.

Depending on the package chosen (IMP, TEMP, PRIME), a set of accurate measurements, tests and analyses will be performed on each single block across all battery strings by Socomec trained engineers.

An in-depth report will provide information about:

- the health of each single battery string/block,
- · the faulty blocks that need to be replaced,
- the real "back-up time" of the battery system (optional).



#### Do you know your real back-up time?

- > For various external factors, your real back-up time could be much less than the one declared by the battery manufacturer.
- > Thanks to a specific set of measurements and analyses, Socomec can provide you with the exact back-up time of your battery system.



o: optional

<sup>\*</sup> during battery charge. \*\*: by performing the end of discharge voltage test.

Battery replacement(1)

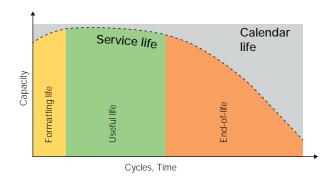


(1) Only for UPS.

The majority of batteries used in UPS applications (VRLA - Valve Regulated Lead Acid) normally have a calendar life of 5-10 years, depending on the local operating conditions. The calendar life is the actual time span from the date of installation until the end of life, when battery capacity drops below 80% of its rating. VRLA batteries that are well maintained and installed in a properly conditioned environment, typically have a service life of 70% to 80% of their calendar life. This explains why the UPS back-up time could differ from the one declared by the battery manufacturer.

For the integrity of business continuity, it is essential to know the estimated end-of life of the battery system and to be correctly advised concerning the best time for its replacement.

The expertise of the UPS manufacturer is the best guarantee for carrying out any battery replacement operations. An expert that understands your equipment and how it is integrated into your unique working environment and who can respond effectively to any anomaly should any occur.



#### **Key points**

- > Checking and recalibration of battery charger setting
- > Fully secure battery discharge test
- > Battery disposal according to local regulations

#### **Benefits**

- > Prevents unexpected early shutdown of the UPS
- > Saves downtime costs
- > Advice for the optimisation of the battery back-up time

.

The battery is a critical component of the UPS system: according to a study by the Ponemon Institute, 65 % of Uninterruptible Power Supply (UPS) system failures are due to batteries. The reliability and availability of these components are vital to ensuring the energy supply to the load.

In the case of a failure, the economic impact of an outage can dramatically increase to hundreds of thousands of euros for the UPS owner.

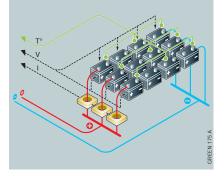
Within the UPS system, the battery represents the weakest and least sophisticated component, while its cost represents an important part of the investment. It is therefore crucial to reduce the number of maintenance operations, maximise the battery's return on investment and anticipate battery malfunctions.

This can be implemented by following the rules described in the IEEE standard 1188 (IEEE Recommended Practice for Maintenance, Testing and Replacement of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications), whilst a more accurate preventive maintenance program can be carried out using a BMS (Battery Monitoring System) which provides all the parameters of the individual battery blocks, continuously checks the battery's efficiency and identifies anomalies in advance.

### What is a battery?

A battery is made up of a collection of:

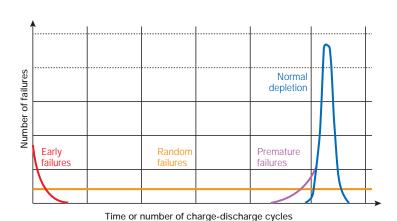
- > blocks (typically 12 VDC), which can be assembled in series to form a string,
- > several identical strings, which can be assembled in parallel to form a battery.



#### Main reasons for battery block failures

For a battery operating in real life conditions, there are 4 types of failures which can create a defective block:

- 1. Early failures, which are mainly due to defects introduced during the manufacturing process. They generally appear during the first discharge cycle.
- 2. Random failures, which can appear at any time during the life of the battery.
- 3. Premature failures.
- 4. End-of-life failures, both of which are due to latent defects or environmental conditions, such as a high ambient temperature, which can shorten the battery's operational life time. If this type of failure appears, it means that the health of the battery string is seriously compromised and the battery cannot be relied upon for autonomy.



Block failures description.

NP 034 A GB



### Customer training

#### certified manufacturer's training programme for UPS and STS



Socomec specialists can help you gain the necessary skills to operate your equipment efficiently and to increase its availability.

Socomec technical training courses can take place either at your site or in Socomec's dedicated training centre.

Available on MASTERYS, MODULYS, DELPHYS, STATYS and communication products.

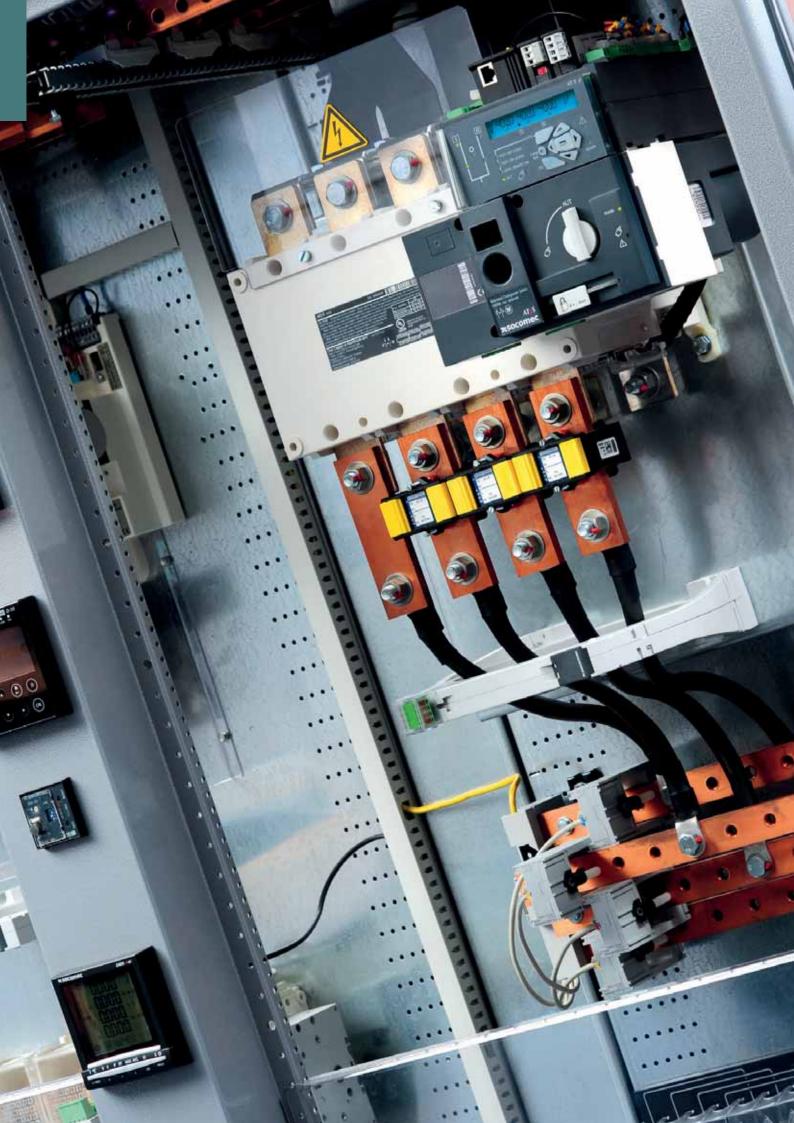
#### **Key points**

- > Pratical training
- > Either in Socomec factories or at customer's site
- > Open discussions and participants' feedback
- > Many types of configurations covered
- Real-case simulations based on customer's actual installation
- > Experienced 'field-tested' trainers

- > Helps you to really know your equipment
- > Real "hands-on" practice on your UPS
- > Understand the alarms









## Switching equipment

Commissioning	
ATYS Automatic Transfer Switch	p. 36
MEDSYS Isolated Power Supply	p. 37
Maintenance and inspection contracts	
A broad range of solutions to suit all your needs	p. 38
Inspection contracts	
ATYS Automatic Transfer Switch	p. 39
Maintenance contracts	
MEDSYS Isolated Power Supply	p. 40
Single services	
Inspection visit for ATyS Automatic Transfer Switch	p. 41
,	,



## Commissioning

#### for ATyS Automatic Transfer Switch



To enable you to quickly get your system up and running, we check the installation, carry out commutation tests and make the necessary equipment settings.

References	
ATyS commissioning	price on request
ATyS M commissioning	price on request

#### **Key points**

- > Settings and configuration to suit your needs
- > Switching test
- > Communication test
- > Handover summary / briefing on how to use the ATyS
- > Service report with overview of installation parameters

- > Checking installation compliance
- > Guaranteeing full functionality in the various operating modes



### for MEDSYS Isolated Power Supply



We deliver the right configuration and checks so you can start using your system right away. We also give you advice on how to use it.

References	
MEDSYS 20 commissioning	923 <b>101 8100</b>
MEDSYS 30 commissioning	923 <b>101 8200</b>
MEDSYS 40 commissioning	923 <b>101 8300</b>
MEDSYS 60 commissioning	923 <b>101 8400</b>

#### Key points

- > Settings and configuration to suit your needs
- > Function tests
- > Communication test
- > Briefing on how to use your installed system
- > Service report with overview of installation parameters

- > Ensuring the system is working properly
- > Checking installation compliance
- > Increasing service life and safety
- > System traceability (products/softwares) and associated configurations



## Maintenance and inspection contracts

a broad range of solutions to suit all your needs



The Maintenance service contracts are entirely tailored around customers' needs, taking into account individual operating constraints, business activity and the unique level of criticality associated with specific applications.

A variety of contracts suitable for users have been developed to cover all needs: from a simple combined service, to a fully-inclusive package that includes the cost of labour and spare parts and delivers the quickest response time to site.

	SILVER	GOLD	PLATINUM	PLATINUM +
Automatic Transfer Switches ATyS				•
Power Factor Correction system COSYS				
Isolated power supply MEDSYS				



## Inspection contracts

### for ATyS Automatic Transfer Switch



In addition to the inspection visit for ATyS changeover switch, it is possible to sign for an inspection contract, according to your operating constraints.

It can be combined with your UPS contract.

SERVICE DESCRIPTION		INSPECTION CONTRACTS		
	SILVER	GOLD	PLATINUM	PLATINUM+
1 inspection visit	•	•	•	•
Thermal imaging	•	•	•	•
Test on load	0	0	0	0
Load duty categorie checking	0	0	0	0
Bypass system inspected	0	0	0	0
Labour & mileage for corrective maintenance		•	•	•
Original spare parts			•	•
Hot-line availibilty	•	•	•	•
Response time to site with next working day	•	•	•	
Response time to site within 6 hours	0	0	0	•
Response time to site within 4 hours*	0	0	0	0
"Test off load"**	•	•	•	•

- •: inclusive
- \*: please check the service coverage in your area.
  \*\*: if GS present on source 2.

References	
Inspection contract SILVER	923 <b>302 7000</b>
Inspection contract GOLD	923 <b>303 7000</b>
Inspection contract PLATINUM	923 <b>304 7000</b>
Inspection contract PLATINUM +	923 305 7000

#### Key points

- > An annual inspection visit by a Socomec engineer certifying that the ATyS switch is functioning correctly
- > A detailed inspection report provided after each inspection
- > A list of every asset tested and detail of the inspection work carried out
- > Highlight any issues found

- > High power availablity guaranteed and performance optimised
- > Reduced risk of potential faults going undetected
- > Costly downtime and the risk of operating losses are cut



## Maintenance contracts

for MEDSYS isolated power supply



Power availability is vital to ensure care continuity and avoid failures that could lead to critical situations for patients.

Your Socomec MEDSYS solution brings you a dedicated answer to guarantee the continuity of service in group 2 medical locations with the manufacturer's guarantee.

Description of services	SILVER	GOLD	PLATINUM
Annual preventive maintenance visit	•	•	•
Labour and travel for corrective maintenance		•	•
Original spare parts			•
Hotline availability during working hours	•	•	•
Emergency hotline 24/7*	0	0	0
Response time to site within next working day	•	•	•
Response time to site within 6 hours*	0	0	0
Response time to site within 4 hours*	0	0	0
Additional preventive maintenance visit	0	0	0
Out of hours preventive maintenance visit during night, weekend & bank holidays	0	0	0
Thermal imaging	0	0	0

- ·: included.
- o: optiona
- \* please check the availability of this service in your area.

References	
Maintenance contract SILVER	923 <b>302 8000</b>
Maintenance contract GOLD	923 <b>303 8000</b>
Maintenance contract PLATINUM	923 <b>304 8000</b>

#### Key points

- > Annual preventive maintenance visit
- > Detailed report including recommendations
- > Technical hot-line

- > Maximum availability of the installation
- > Manufacturer expertise
- > Guaranteed response time to site



## Single services

### inspection visit for ATyS Automatic Transfer Switch



A routine inspection of the transfer switches by qualified personnel is required to meet the requirements of insurance companies and to ensure the optimal operation of critical applications.

The inspection visit for ATyS comprises a site visit by a qualified Socomec engineer, which certifies that each transfer switch is functioning correctly.

After each inspection and testing procedure the engineer will provide a detailed report and declaration of conformity.

References		

Inspection visit for ATyS	923 <b>402 7000</b>

#### **Key points**

- > Manufacturer seal of approval
- > Latest firmware updates
- > Complete report including technical recommendations
- > Declaration of conformity

- Guaranteed high power availability and optimum performance
- > Reduced risk of potential faults going undetected
- > Avoids costly downtime and operating losses







# Power monitoring and measurement

Commissioning	
ISOM & ISOM DIGIWARE insulation monitoring system	p. 44
COUNTIS energy meter, DIRIS multi-function meter, DIRIS Digiware power metering system	p. 45
DIRIS Q800 network analyser	p. 46
WEBVIEW-L power monitoring software	p. 47
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Fault location unearthed IT systems	p. 51
Inspection visit for COSYS and PFC power factor correction system	p. 52
Customer training	-
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Using IT earthing systems with ISOM DIGIWARE architecture	p. 53
DIRIS Q800 network analyser	p. 54
WEBVIEW-L software	p. 55
N'VIEW-L software	p. 56



### for ISOM & ISOM DIGIWARE insulation monitoring system



To enable you to quickly get your system up and running, we check the installation, carry out communication tests and make the necessary equipment settings.

References	
ISOM commissioning	923 <b>101 2210</b>
ISOM Digiware commissioning	923 <b>101 2200</b>
Options	
WEBVIEW M commissioning (Mapping/alarms threshold)	923 <b>101 3200</b>

#### Key points

- > Full wiring connection check (IMD/Injector/ sensors)
- > System Configuration and verification on load
- > Basic training on ISOM/ISOM Digiware
- > Simulation and fault detection
- > Configuration of the full installation mapping (insulation)

- > Ensures that the system works perfectly
- > Increased continuity of service and security
- System traceability (products/softwares) and associated configurations
- > Monitoring and predicting insulation levels for each circuit



for COUNTIS energy meter, DIRIS multi-function meter, DIRIS Digiware power metering system



To enable you to get your system quickly up and running, we check the installation, carry out communication tests and configure the equipment.

References	
Commissioning COUNTIS / DIRIS / DIRIS DIGIWARE architecture	923 <b>101 1200</b>
Options	
Help with configuring the COUNTIS/DIRIS/DIRIS Digiware architecture	923 <b>401 1200</b>
Checking the metering consistency in the measurement chain	923 <b>407 1100</b>

#### Key points

- Controlling the complete chain (equipment/connection/ magnetic cores)
- > Settings and function test
- > Communication test
- > Information on how to use your installed system
- > Service report with overview of installation parameters

- > Installation compliance
- > Reliability of measured data
- > Tracking of settings



### for DIRIS Q800 network analyser



To enable you to quickly get your system up and running, we check the installation, the equipment settings and the software installation. To make it easier to use, training is included in the commissioning.

References	
DIRIS Q800 commissioning	923 <b>101 5000</b>
Options	•
Training on energy quality	consult us
Training on DIRIS Q800 – at customer's site	923 <b>201 5000</b>

#### Key points

- > Checking connections
- > Event settings according to EN50160
- > Network data log settings
- > Installing the software; Q800 tools, Q800 analyser, PQ diffractor
- > Training on how to use the equipment and related software

- > Ensuring the equipment is correctly installed
- > Reliability of measured data
- > Details on EN50160 report



### for WEBVIEW-L power monitoring software



We help you configure your architecture and get to grips with the software so you can quickly get your system up and running.

References	
Commissioning H80 WEBVIEW L-100	923 <b>101 3400</b>
Commissioning H80 WEBVIEW L-200	923 <b>101 3500</b>
Options	
Help with configuring WEBVIEW L – at customer site	923 <b>401 3000</b>
WEBVIEW L training – at customer site	923 <b>201 3000</b>

#### Key points

- > Checking system prerequisites are met
- > Setting up measuring, circuit and data equipment
- > Training and help with setting up a hierarchy and a Photoview page
- > Configuring the Datalogger feature
- > Training on how to use your installed system
- > Service report with overview of installation parameters

- > Saves time during installation
- > Quickly get to grips with software features
- > Using and configuring the software



### for N'VIEW energy management cloud solution



We help you configure your architecture and get to grips with the software so you can quickly get your system up and running.

References	
Commissioning N'VIEW 0 to xxx variables	923 <b>101 xxx</b>
Options	
Help with configuring N'VIEW at customer site	923 <b>401 4000</b>
N'VIEW training at customer site	923 <b>201 4000</b>

#### Key points

Step-by-step startup to ensure efficient use:

- T0 preparation phase:
   Collecting required data and checking prerequisites are met
- > T1 launch phase: Go-live
- > T2 reception and handover phase
- > T3 subscription phase

- > Supporting the installation
  - Dashboards
  - Analysis
  - Alerts
  - Personalised automated reports
- > Saves time during installation
- > Quickly get to grips with software features



### for COSYS Power Factor Correction system



We check the system, set it up and check it is working properly, so you can start using it right away.

References	
COSYS commissioning	923 <b>101 6000</b>
Options	
COSYS sizing	923 <b>403 6000</b>
Audit Power Factor Correction	923 <b>404 6000</b>

#### Key points

- > Checking connections
- > Measuring the recovered reactive power
- > Setting up the controller
- > Checking that the multipoints are correctly connected
- > Power status with and without compensation
- > Service report with overview of installation parameters

- > Ensuring the equipment is correctly installed
- > Ensuring full functionality
- > Checking the sizing of the correction factor



## Maintenance contracts

### for COSYS and PFC power factor correction system



Your Socomec COSYS power factor correction system allows you to achieve significant cost savings on your energy bill, protects your equipment, and extends its operating lifetime.

Your electrical installation evolves. Environmental and operational changes, aging equipment, etc., are all factors that have an impact on your power consumption.

Within our maintenance contract, Socomec Experts take action for:

- · preventive maintenance on your system,
- · checking the correct sizing of your COSYS PFC,
- · corrective intervention in case of system failure.

SERVICE DESCRIPTION	SILVER COSYS and PFC	PLATINUM COSYS*
1 Annual preventive maintenance visit	•	•
Hot-line availability	•	•
Thermal Imaging	•	•
Response time to site within next working day	•	•
Labour & mileage for corrective maintenance		•
Replacement of consumables if defective** (fans, dust filter if applicable)		0
Additional preventive maintenance visit	0	0
Out of hours preventive maintenance visit during night, week-end, bank holidays	0	0
Replacement of contactors after every 80,000 operations***		•
Complete annual cleaning of the unit***		•
Annual check of the battery sizing***		•

- ·: included.
- o : optional.
- \* Commissioned from 2012 onwards.
- \*\* Excluding replacement of chokes and capacitors.
  \*\*\* Subject to signature / renewal of the contract over a continuous period of 3 years.

References	
Maintenance contract SILVER	923 <b>302 6000</b>
Maintenance contract PLATINUM	923 <b>304 6000</b>
Maintenance contract Silver Multibrand	923 <b>302 6100</b>

#### Key points

- > Checking hot points, clamps and connections
- > Checking that the multipoints are correctly connected
- > Checking and updating the regulator parameters
- > Service report with recommendations

- > Ensures that the installed battery is always adapted to the load
- > Operational safety



## Single services

### fault location unearthed IT systems



Our experts go on site and help you to check the functioning of the Insulation Monitoring Device (IMD), to measure the insulation of your installation and to detect and localize faults up to the end feeders/lines.

References	
Fault location at customer site	923 <b>402 2500</b>
Inspection of the customer's IT installation	consult us

#### **Key points**

- Using the latest generation of portable insulation fault location tools with the Ohm Scanner technology
- > Insulation mapping of the installation

- > Reduces fault localization time
- > Analysis of failures and fault origins
- > Ensures optimal continuity of service
- > Gives you a clear picture of the level of insulation from the mains supply to the end feeders



## Single services

### inspection visit for COSYS and PFC power factor correction system



During the inspection visit we check the general operating condition of the Power Factor Correction system in its operating environment. This allows us to identify areas for improvement.

References	
Inspection visit for COSYS Power Factor Correction system	923 <b>402 6000</b>

#### Key points

- > Checking hot spots, clamps and connections
- > Checking components: filters, fans, capacitors, fuses, contactors
- > Checking that multipoints are correctly connected
- > Checking the correction power is still available
- > Checking and updating controller settings
- Service report with recommendations and suggestions

- > Identifying watch-points
- > Operational qualification
- > General status report on the installed system



### on using IT earthing systems with ISOM DIGIWARE architecture

Power monitoring and measurement



Combining theory with practice, by the end of this training module you will be able to independently take control of your system to ensure optimal continuity of service.

References	
Training on using IT earthing systems on ISOM Digiware architecture – at customer site	923 <b>201 2200</b>
Training on the portable device	923 <b>201 2500</b>
Training on earthing systems	consult us

#### Key points

- > Understanding the specifics of the IT neutral earthing system
- > Learning about installation standards
- > Handling and configuring ISOM devices
- > Practical exercises

- > Becoming independent
- > Reducing service times
- > Optimum service continuity

on DIRIS Q800 network analyser



The training module on how to use the DIRIS Q800 network analyser gives you full control over your setting so you can set up and use your network analyser.

References	
DIRIS Q800 training at customer site	923 <b>201 5000</b>
Training on the energy quality	consult us

#### Key points

- > Setting and using DIRIS Q800 network analyser
- > Setting events according to EN 50160
- > Comprehension of PQDIF file
- > Understanding a balance sheet EN 50160

#### Benefits

> Independently set up and use your DIRIS Q800 network analyser



on WEBVIEW-L software



The training module on how to use the WEBVIEW-L gives you full control over your settings so you can create reports, charts, mappings and monitor all your energy readings.

References	
WEBVIEW L training – at customer site	923 <b>201 3000</b>
Training Basics of industrial communication	consult us
Training on the energy quality	consult us

#### Key points

- Overview of communication equipment, standards and protocols
- > Introduction to H80 gateways and the WEBVIEW-L software
- > Creating and managing data profiles
- > Configuring Modbuscommunication devices
- > Configuring the Datalogger feature
- > Creating hierarchies and PhotoView pages
- > Software configuration
- > Practical exercises based on your configuration

#### Benefits

> Independently set up and use the energy data from your power monitoring architecture



#### on N'VIEW software



The training module on how to use the N'VIEW software gives you full control over your settings so you can set up and use your energy management software.

References	
N'VIEW training – at customer site	923 <b>201 4000</b>
Basics of energy efficiency	consult us

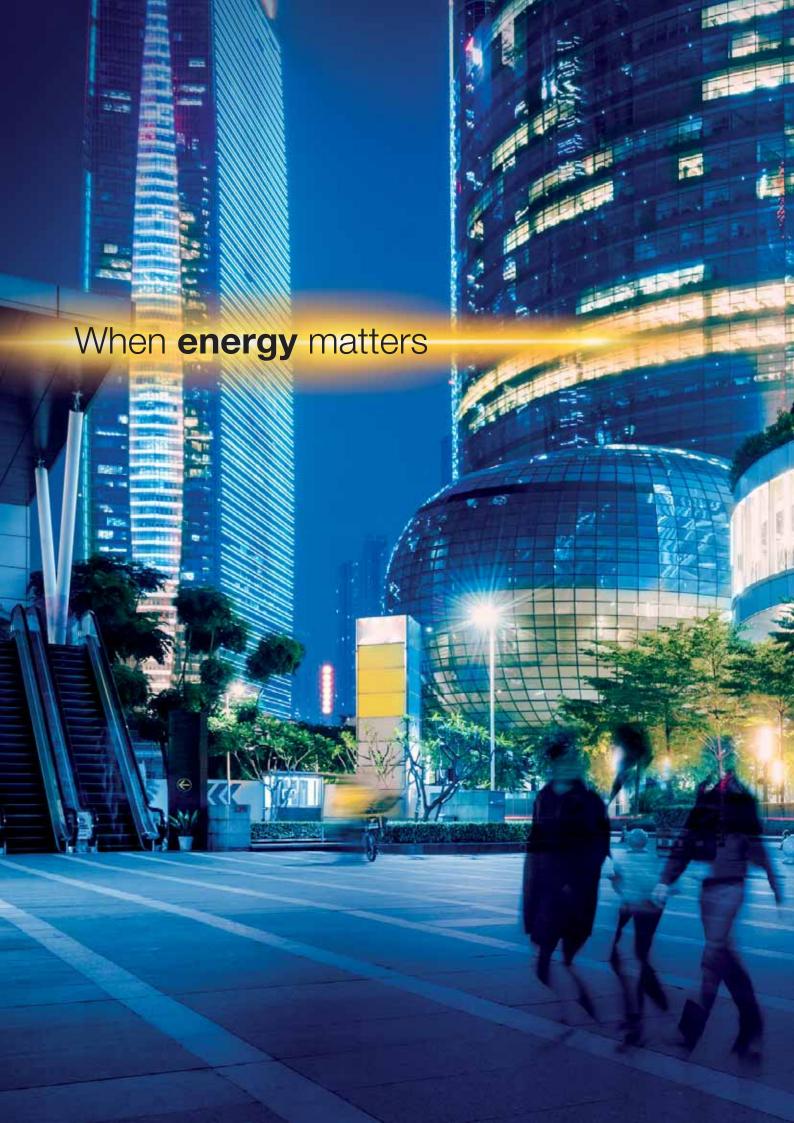
#### Key points

- > Two training levels: user and advanced user
- > Setting up virtual meters
- > Configuring the hierarchy
- > Map, degree day and temperature
- > Managing profiles
- > Creating ratios, setting up tariffs
- > Configuring widgets and dashboards
- > Creating reports
- > Setting up alarms

#### **Benefits**

> Independently set up and use your N'VIEW energy management software









## **Energy storage system**

#### Preventive maintenance

Energy storage system SUNSYS HES L

p. 60

#### Extended warranty

Energy storage system SUNSYS HES L

o. 62



## Preventive maintenance

for energy storage systems SUNSYS HES L and SUNSYS HES XXL



Preventive maintenance is vital in order to ensure that your energy storage system is operating at peak efficiency. If you subscribe to an extended warranty for your system a preventive maintenance contract is mandatory.

#### Adapted to your budget

 We offer several options that may or may not be selected when subscribing to the service

See options detailed on the next page.

#### Optimisation tips

 When our experts share the preventive maintenance report with you, they also provide advice in order to help you improve the use of your system and its operating environment.

#### Autonomy « à la carte »

 Depending on your desire and your skills, we can empower you by providing training in specific maintenance operations so that you can carry out some activities yourself.

#### Peace of mind

 If you want a turnkey solution, our experts take care of everything! They take care of preventive maintenance from its planning to its completion in order to guarantee the reliability of your system, to maximise its lifespan and to limit corrective operations.

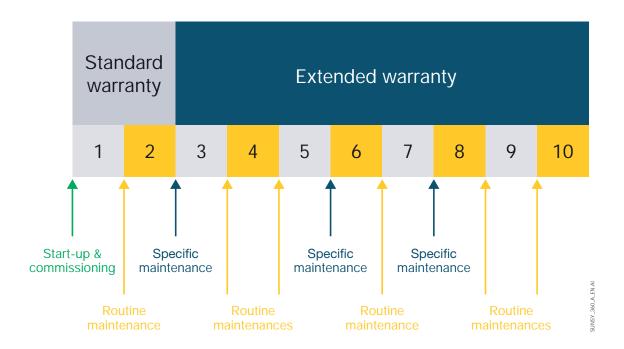
#### A solution for

- > Commercial and industrial buildings
- > Electric vehicle charging stations
- > Isolated microgrids
- > Resilient microgrids

#### **Key points**

- > Several options available to adapt the offer to your budget
- > Personalised support from our experts according to the desired level of autonomy
- > Tips to improve your performance





#### Preventive maintenance - optimising the lifespan of your system!

To guarantee optimal system operation, periodic maintenance by an expert is essential. This is the best way to ensure the reliability of your system over its lifetime.

- 2 modular offers are available:
- DIY partner package: an offer favouring cost reduction but also requiring input from you.
- Complete Socomec package: a complete offer for your peace of mind, where we take care of everything.

	DIY PARTNER PACKAGE	COMPLETE SOCOMEC PACKAGE
Routine maintenance visits carried out by Socomec		Included
Specific maintenance visits carried out by Socomec	Included	Included
Preventive maintenance visit report with recommendations	During specific maintenance visits	Included
Labour included	During specific maintenance visits	Included
Parts for specific and routine maintenance operations	Option	Option
Traning in routine maintenance operations	Included	
Software update	During specific maintenance visits	Included



## Extended warranty

### for energy storage systems SUNSYS HES L and SUNSYS HES XXL



Warranty extensions are available to provide a total warranty of 5 to 10 years for your battery or the complete storage system, depending on your needs. It includes the corrective maintenance of your guaranteed items (parts included) as well as a follow-up of your requirements.

#### Full coverage

 Benefit from an extended manufacturer's warranty of up to 10 years, depending on your needs.

#### Battery performance guarantee

 The warranty extension includes a performance warranty on the battery.
 This is the warranty of a DC residual energy level depending on the battery use.

#### Controlled budget

 You know the price of the warranty extension from the outset and, with just one payment, you can therefore avoid unforeseen costs.

#### Speed of intervention

 In the event of a breakdown, our experts provide you with a rapid response: within 1 day for initial telephone support and within 1 week for an on-site visit, if this is required.

#### A solution for

- > Commercial and industrial buildings
- > Electric vehicle charging stations
- > Isolated microgrids
- > Resilient microgrids

#### **Key points**

- > Complete coverage of your system
- > Controlled budget
- > Battery performance guarantee
- > Peace of mind



#### What does the extended warranty cover?

- Corrective maintenance of the complete system or just of the battery, depending on the chosen warranty, (repair or replacement of defective parts), including parts replaced, the labour on site as well as travel and accommodation costs<sup>(1)</sup>
- · Battery performance guarantee
- · Assistance from our team of experts in the event of a problem, with a response as soon as possible

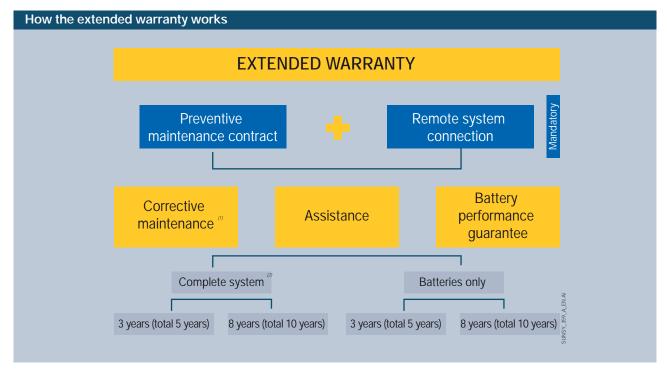
#### What conditions must be met in order to benefit from this cover?

For the warranty to be valid, a preventive maintenance contract must be drawn up. It is also mandatory to have a remote system connection allowing access to historical battery data.

#### A guarantee that's adapted to your needs

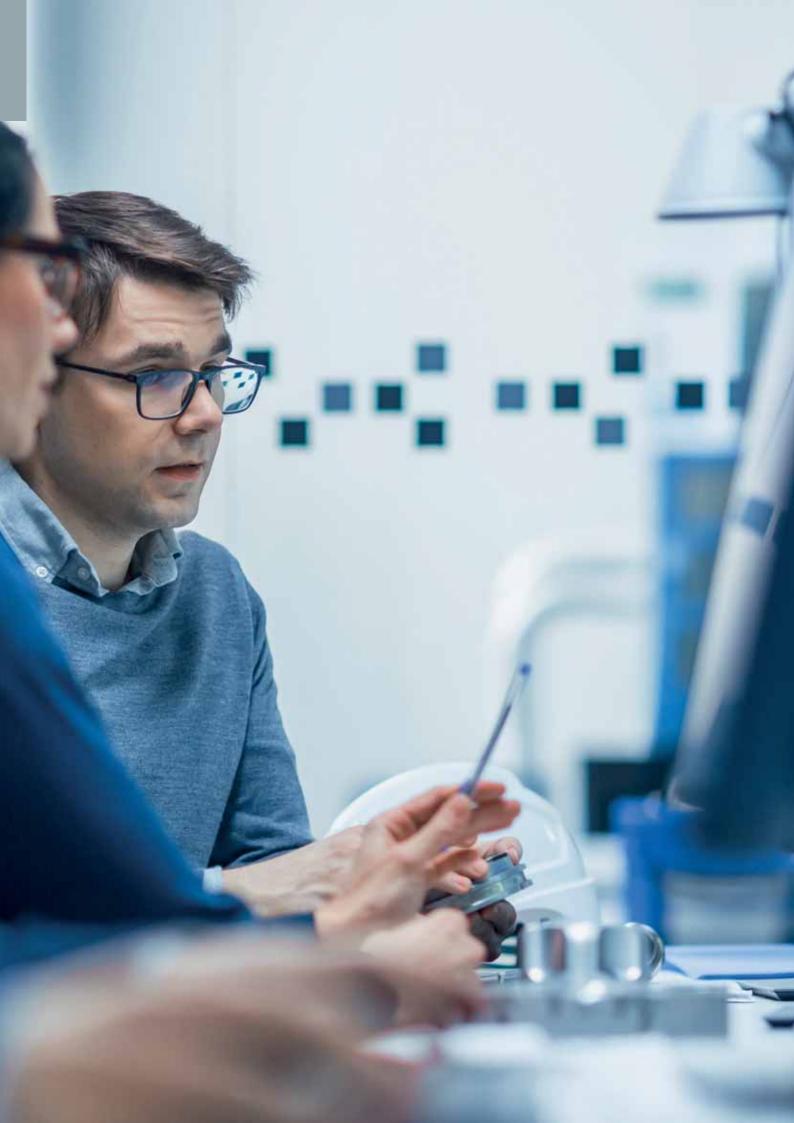
In order to offer you greater flexibility with your guarantees, we offer various options:

- 3-year warranty extension (total system warranty period 5 years)
- 8-year warranty extension (total system warranty period 10 years)
- Extended warranty applicable to the complete system
- · Extended warranty applicable to the batteries only



(1) Provided that the installation is in a country where a Socomec subsidiary is present and as specified in your commercial offer.







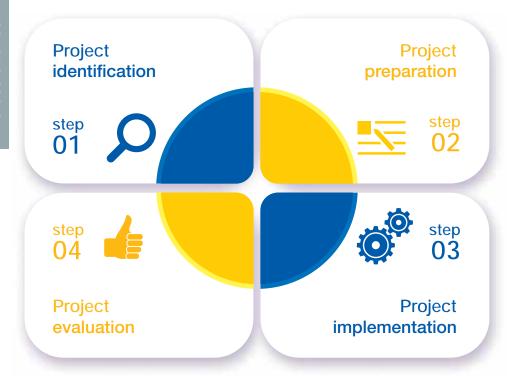
## **Professional services**

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## Project consultancy

### personalised support for unique projects



Our team of experts is here to help you meet the requirements of each project and to make the best choices.

We will perform a diagnostics of your facility, give you personalised technical advice and help budget your finances.

Whether it's replacing a UPS, sizing a power factor correction system (PFC), implementing a monitoring architecture as part of an ISO 50001 project... our experts are on hand to support you at every stage of your project:

- Identifying the project: brief, design, support.
- Preparing for the project: onsite surveys, sizing, implementation planning, financing.
- Implementing the project: commissioning, facility optimisation, operating services.
- Evaluating the project: end-line report with areas for improvement.

#### **Key points**

#### Tailor-made:

- > Project identification
- > Project preparation
- > Project evaluation
- > Project implementation



## **Audit**

### to improve your site's power factor



Reactive power has negative effects on electrical networks. A number of factors must be taken into account to effectively compensate for it.

#### Our expertise:

- Audit: we identify loads and analyse their effects on the network
- Sizing: precise calculation of the reactive power to be corrected
- Installation recommendations: choice and location of equipment

References	
Measuring – Analysis – Sizing the power factor correction system	923 <b>403 6000</b>
Options	
COSYS inspection visit	923 <b>402 6000</b>
COSYS commissioning	923 <b>101 6000</b>
COSYS SILVER service maintenance contract	923 <b>302 6000</b>
COSYS SILVER service maintenance contract for Multibrand	923 <b>302 6100</b>
COSYS PLATINUM service maintenance contract	923 <b>304 6000</b>

#### Key points

- > Taking the customer's environment into account
- > Logging a week's worth of customer data
- Correctly sizing the compensation system for your installation, if necessary

- > Assessing the available power
- > Recommended means of compensation
- > Optimising the efficiency of transformer units



## **Audit**

## Power Quality Audit for optimising the reliability, efficiency and safety of your equipement



The Power Quality Audit (PQA), is a service offered by Socomec that checks the load level and the quality of the low voltage electrical installation.

The PQA uses network analysers, designed to detect faults and deteriorations and record parameters and information over a significant period that may be of use in locating the causes of electrical disturbance.

Data is collected and analyzed by Socomec engineers who diagnose the problems. They then suggest the most appropriate solutions that will have beneficial impact on the reliability of the installation, and ultimately extend equipment lifetime.

References	
Measurements - On-site data logging - Investigation	923 <b>404 2500</b>
Energy quality	consult us
Harmonics and Power Factor correction	consult us
Neutral earthing system	consult us

#### Key points

- > Voltage variation
- > Harmonic distortion
- > Transient current
- > Neutral and earth fault, EMC environment
- > Unbalanced three-phase load
- > Power factor correction

- > Detects recurring faults
- > Identifies phase shifts and malfunctions
- > Anticipates deterioration of the installation
- > Extends service life of equipment
- > Improves system reliability



## Power testing & certification

#### Tesla Lab



Tesla Lab - Power Testing and Certification is an independent laboratory specialized in testing of LV switchgears, components and switchgear assemblies.

Thanks to a wide range of equipment and experience in electrical, mechanical, climatic and functional tests for low voltage operating, control, safety and measuring equipment, Tesla Lab can relieve you of all the administrative steps involved in a large number of certification procedures.

It will take care of the contacts with the certification bodies as well as monitoring the procedure through to the obtaining of the certificate.

Tesla Lab is accredited by







and regularly works in partnership with the international certification bodies: KEMA, CEBEC, UL, CSA, ASTA, Lloyd's Register of Shipping, Bureau Véritas, BBJ-SEP, EZU, GOST-R, ...

#### Key points

- Several categories of tests: short-circuit tests, verification of temperature rise, overload of endurance tests
- > Several standards covered: IEC, EN, UL, CSA

#### Benefits

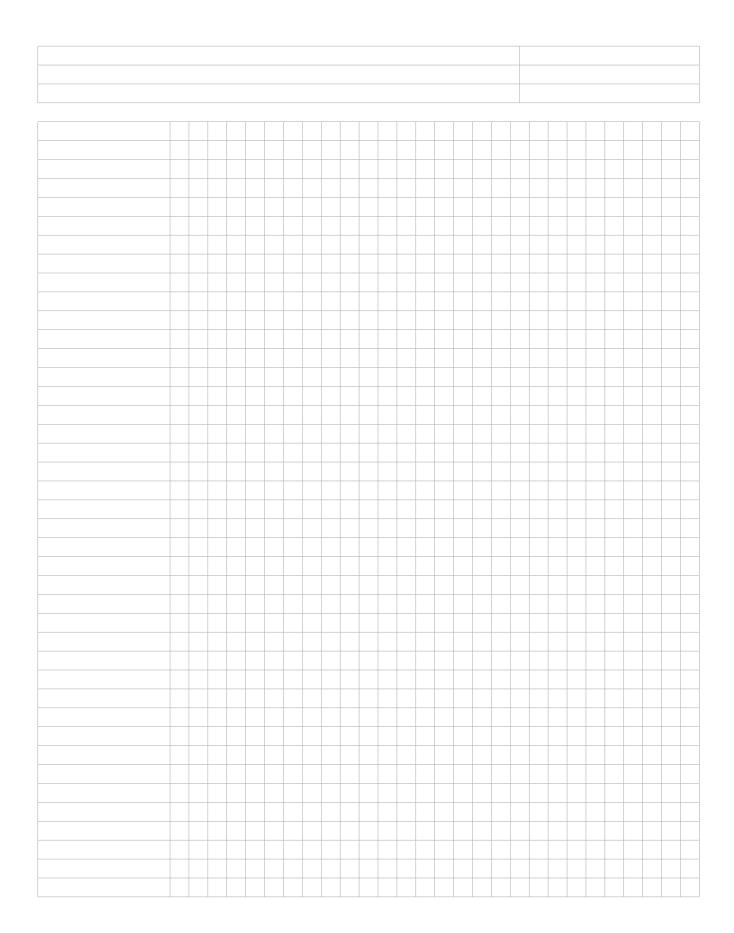
No need to have multiple contacts to test your products for compliance in multiple markets



Tesla Lab: Your passport to success



## Note







### Socomec: our innovations supporting your energy performance

1 independent manufacturer

3,900 employees worldwide

8 % of sales revenue dedicated to R&D

400 experts dedicated to service provision

#### Your power management expert







POWER MONITORING



POWER CONVERSION



ENERGY STORAGE



EXPERT SERVICE

#### The specialist for critical applications

- Control, command of LV facilities
- Safety of persons and assets
- Measurement of electrical parameters
- Energy management
- Energy quality
- · Energy availability
- Energy storage
- Prevention and repairs
- Measurement and analysis
- Optimisation
- Consultancy, commissioning and training

#### A worldwide presence

#### 12 production sites

- France (x3)
- Italy (x2)
- Tunisia
- IndiaChina (x2)
- USA (x2)
- Canada

### 30 subsidiaries and commercial locations

- Algeria Australia Austria Belgium China
- Canada Dubai (United Arab Emirates) France
- Germany India Indonesia Italy Ivory Coast
- Netherlands Poland Portugal Romania Serbia
- Singapore Slovenia South Africa Spain Sweden
- Switzerland Thailand Tunisia Turkey UK USA

80 countries where our brand is distributed

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