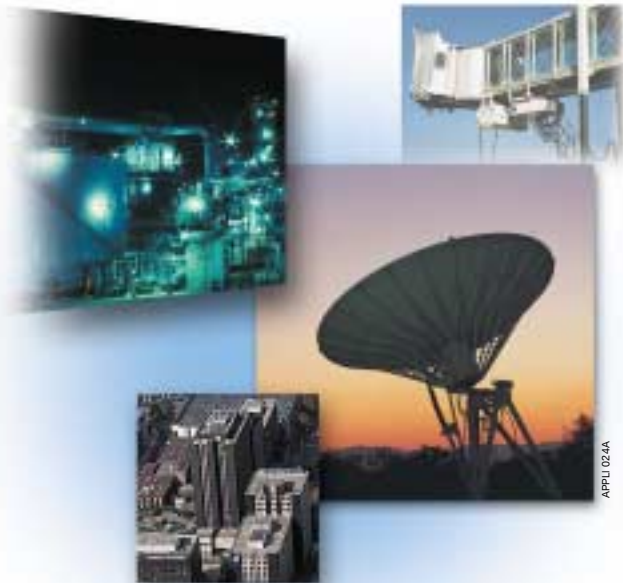


DIGYS
evo

THE SMART POWER SUPPLY *evo*LUTION

Uninterruptible Power Systems from 10 to 60 kVA





Secure power supply, wherever it's needed...

Secure power supply, wherever irreplaceable data loss, lost production and electrical downtime are serious issues, especially as main power is subject to numerous short and long disturbances.

Specialising in critical application power supplies, SOCOMEC SICON UPS provides effective protection of sensitive equipment against disturbances affecting the quality of the electrical network.

SOCOMEC SICON UPS offers a complete range of solutions suited to various IT, industrial and telecommunications configurations:

- **UPS** from 250 VA to 4800 kVA,
- **rectifier-chargers** from 7.5 to 6000 A,
- **DC/AC converters** from 7.5 to 18 kVA,
- **static transfer systems** from 16 to 4800 A,
- **harmonic compensators**,
- **400Hz frequency converters**.



3 factories in France (Alsace),
3 factories in Italy.



SOCOMEC, an independent manufacturer

The SOCOMEC Group employs 1700 people and has a turnover close to € 190 million.

Its core activities are the manufacture of electrical products and electronic equipment.

The company has full industrial control in both of its specialist divisions, guaranteed by ISO 9001:2000 certification.

SOCOMEC SICON UPS: know-how

Located in France and in Italy, SOCOMEC SICON UPS extends way beyond European borders.

The company has based its strategy on two main policies:

- **total quality** of its products and services,
- **adaptability** to specific customer needs.

SOCOMEC SICON UPS uninterruptible power systems are designed and manufactured to the following international and European standards: IEC, EN, VDE, BS, etc, and to meet the requirements of manufacturers of sensitive electronic equipment.

UPS systems have been installed in the following sectors: financial services, telecommunications, nuclear, military, robotics, hospitals, etc.

SOCOMEC manufactures also:

A range of Switching and Protection Systems.

Future growth of the Group will also be fuelled by a second industrial activity independent of its UPS systems, i.e. low voltage Industrial switches and Protection systems.

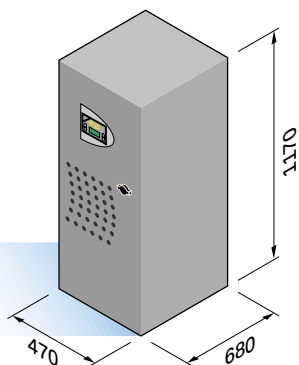
This Division designs and manufactures the widest range of:

- load break switches,
- changeover switches,
- fuse protection,
- energy and control management,
- safety enclosures...

Exceptional performance in a compact unit

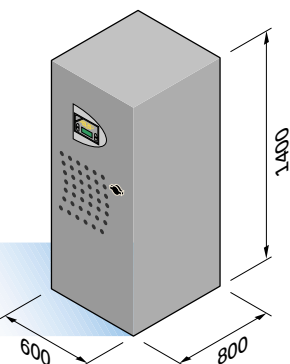
Dimensions

DIGYS 02 D



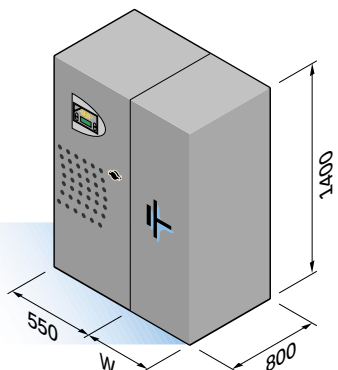
Power		Weight (kg) with built-in battery*	
1-ph. kVA	3-ph. kVA	10 min kg	20 min kg
10	10	210	220
15	15	230	
20		255	

DIGYS 03 D



Power		Weight (kg) with built-in battery*	
3-ph. kVA		10 min kg	20 min kg
20		315	415
30		440	

DIGYS 015 C

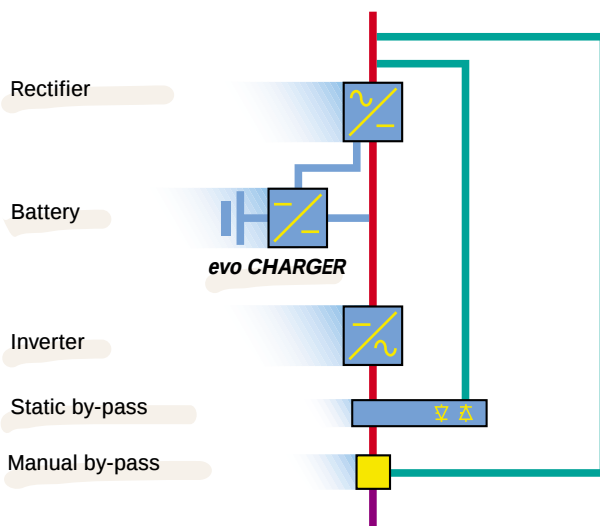


Power 3-ph. kVA	UPS weight kg	Battery back-up time*			
		10 min W (mm)	weight (kg)	15 min W (mm)	weight (kg)
40	205	450	515	450	715
60	225	450	715	900	1030

* The batteries come in life expectancy versions of 3-5, 7-10 or 10-12 years.
Characteristics provided with a 3 x 400 V + N mains power supply.

Technology

DIGYS 009 B GB



Technical data

Rectifier input

Nominal voltage	380 V - 400 V - 415 V or 208 V - 220 V - 230 V ⁽¹⁾
Voltage tolerance	400 V ± 20% ⁽³⁾ or 220 V ± 20% ⁽¹⁾
Nominal frequency	50 - 60 Hz
Frequency tolerance	45 Hz to 65 Hz
Power factor	0.98
THDI harmonic feed-back rate ⁽²⁾	5%

Output

Power factor	0.8
Nominal voltage	
Single-phase	220 V - 230 V - 240 V
Three-phase	380 V - 400 V - 415 V or 220 V - 230 V - 240 V ⁽¹⁾

Voltage stability	
Static condition	± 1%
Dynamic condition on load step from 0 to 100%	- 4% + 2%
Harmonic distortion rate (THDV)	
On linear load	< 1.5%
On non-linear load	< 5% (according to EN 50091-3) ⁽³⁾
Crest factor	up to 3
Nominal frequency	50 - 60 Hz (frequency converter possible)
Inverter frequency tolerance	± 0.1%
Overload	
1 minute	150% ⁽³⁾
10 minutes	125% ⁽³⁾
Overall efficiency	
Global	93% ⁽³⁾
In ECO-MODE configuration	98%

Environment

Colour	RAL 7012
Sound level	< 49 dBA ⁽³⁾ at 1 meter
Compliance to standards	EN50091-1 (safety)/EN50091-2 (EMC) EN50171 (security lighting)
UPS classification according to EN62040-3	Class VFI (Voltage and Frequency Independent)

(1) 220 V version only
(2) **evo PLUS** version

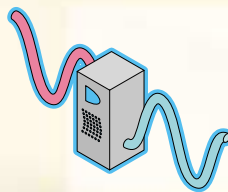
(3) according to power

The smart power supply evolution

UPS single-phase from 10 to 20 kVA
three-phase from 10 to 60 kVA



PCTO 003 A

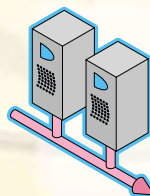


Quality power supply

DSP digital regulation ensures exceptional performance in compact volumes, guaranteeing maximum reliability. The **evo PLUS** version comes with sinusoidal absorption, facilitating integration of the UPS in all power supply systems.

► see page 2

PCTO 004 A

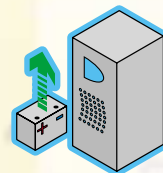


Flexible up-grading and redundancy

Placing up to 4 modules in parallel configuration gives improved installation reliability, increases the power output and reduced initial investment costs.

► see page 2

PCTO 005 A

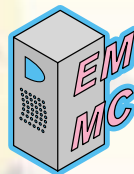


evo CHARGER

The universal battery-charger that guarantees reliability of the battery in time and offers back-up expansion to numerous hours.

► see page 3

PCTO 006 A

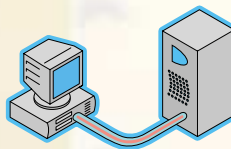


Flexibility

DIGYS evo is available in different models to satisfy the most specific requirements with **EM** and **MC** versions.

► see pages 4 and 5

PCTO 007 A



Communication

A complete software range is available to guarantee protection of IT equipment and to monitor that the system is operating properly.

► see pages 7, 8 and 9

PCTO 008 A



Round-the-clock monitoring with TELESERVICE

Connection to the **TELESERVICE** station means 24 h supervision, security and peace of mind.

Digital technology and expandable configuration

Quality power supply

► Use of digital technology



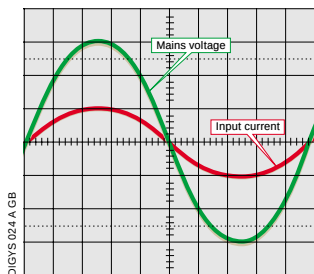
DIGYS evo is fully controlled by Digital Signal processor (DSP), performing the real-time processing of a great number of information (20 million instructions per second).

The digital control provides maximum performance in terms of:

- voltage accuracy, essential for supplying non-linear loads,
- efficiency,
- reliability.

evo PLUS: harmonic feed-back

► Integration in low voltage networks



Certain configurations in low voltage distribution networks, notably when supplied by gen-set, require that the rectifier's harmonic current feed-back be limited.

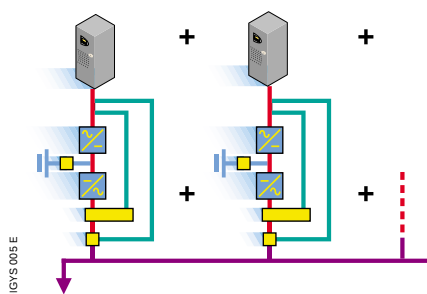
To meet these requirements, the **evo PLUS** rectifier has a high performance 'clean' input current with very low harmonic feed-back, generating

less than 5%. This performance is independent from the frequency and impedance of the rectifier input power supply.

evo PLUS technology is fully compatible with all distribution networks, including those with filtering or power factor compensation systems.

Parallel systems

► Easily installed in parallel configuration



Parallel configuration enables the power to be upgraded and / or the reliability (redundancy) to be improved.

The modular design allows flexibility for:

- immediate or subsequent addition of single units,
- global redundancy of the system.

evo CHARGER

► The advanced universal battery-charger

evo CHARGER is an innovative battery-charger that enables batteries of all kinds to be used with **DIGYS evo**.

The following types of batteries in particular may be used with the standard product:

- hermetically-sealed lead batteries, both AGM and GEL type with the **evo SYSTEM** charging method,
- open vase batteries with 2-level charging,
- Nickel-Cadmium batteries with 2-level charging.

Thanks to the introduction of **evo SYSTEM**, **DIGYS evo** gives greater importance to the battery. This new charging method increases battery life expectancy by as much as 30 %.

Based on a charging system that is distinct from the rectifier, **evo SYSTEM** provides compensation of the battery voltage in relation to temperature and, for applications in which temperature is particularly high, it activates a step charge that ensures the battery is permanently in the optimal charge condition.

In the event of lengthy discharges, a special check is run that automatically protects the battery.

evo CHARGER will recharge batteries to reach a back-up time of four hours (up to 20 kVA). Demonstrating the flexibility of **DIGYS evo**, up to three **evo CHARGERS** can be installed in parallel where extra long back-up is required.

Via **NET VISION**, which comes as a standard in the **MC** version, **evo CHARGER** can send an e-mail with the outcome of a battery test, run either automatically or manually.

ECO-MODE

► Economic, fail-safe operation

When operated in **ECO-MODE**, **DIGYS evo** is even more economic (yield > 98 %).

In **ECO-MODE**, the load is supplied by the utility. In the event of a mains outage, the inverter takes over the loads and provides continuity of supply. The loads are then transferred back on to the utility once stable tolerances have been re-established.

ECO-MODE can be programmed through the display and keyboard or communication software packages.

Flexibility for all requirements EMergency (EM)

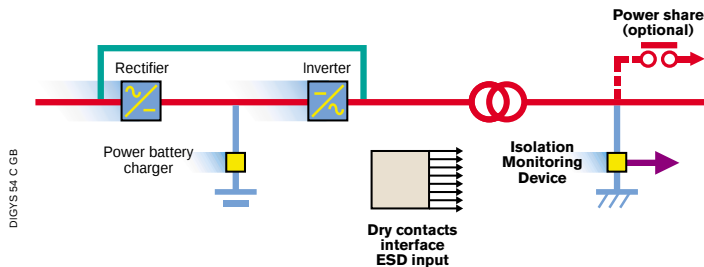
An adapted solution

► For security lighting, alarms, medical equipment

The **DIGYS EM** range complies in full with the requirements of the European norm EN50171 (Safety Lighting Power Supply).

Special features of the **DIGYS EM** products are:

- suppression or inhibition of the automatic by-pass,
- dry contact interface card, signalling the following items: mains voltage input, load powered by inverter, load powered by utility, end of discharge alert (for slow discharges and / or end of back-up time), general alarm,
- THDI < 5 % (with **evo PLUS** version),
- high back-up: 90 minutes back-up at start of service life (for 60 min. requested),
- recharge time less than 8 hours giving 80 % of the assigned back-up,
- upstream / downstream galvanic isolation (neutral arrangements downstream are IT type),
- output insulation monitoring,
- input for a remote emergency stop device,
- possible Power Share output for powering emergency lights only with the utility down (optional).



DIGYS evo options

► Many options exist to adapt the system to all your needs

- Back-up expansion with hermetically-sealed, open vase or NiCd batteries
- Remote mimic panel (see page 7)
- Extra communication interfaces (see pages 8-9)
- External manual by-pass
- Power Share outlet for management of the supply of power to users
- Isolation controller.

and Mission Critical (MC)

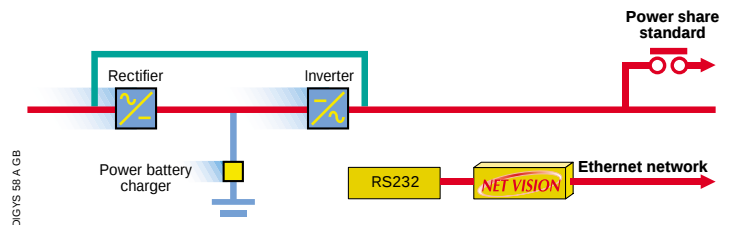
Smart power management

► The Mission Critical range, conceived for installations that comprise loads with different criticality levels

Thanks to the Power Share outlet, part of these users (those with low priority) may be excluded in critical situations leaving full availability of the power supply for the users that have priority.

The **NET VISION** program can be used to configure the conditions under which less critical loads may be excluded:

- residual battery capacity (as %),
- residual back-up time (in minutes),
- mains down time (in minutes),
- manual control.



Galvanic isolation

► For any neutral system

DIGYS evo can be used with any neutral system, if necessary by fitting an isolating transformer inside an external cabinet.

If the batteries are not housed in the UPS, the transformer can be put in the machine.

		Transformer cabinet			
	Power kVA	Width ⁽¹⁾ mm	Depth mm	Height mm	Weight kg
1-phase	3-phase				
	10	460	680	1170	110/140
	15	460	680	1170	120/190
	20	460	680	1170	140/190
	30	460	680	1170	240
	40	600	800	1400	250
	60	600	800	1400	260

(1) When the cabinet is attached to a UPS from 10 to 30 kVA, add 50 mm.

Easy installation

Installation

► Easy installation in your premises

DIGYS evo is a compact unit with a built-in sealed lead battery. Its attractive features, reduced dimensions and quiet running are ideal for installation in the vicinity of the load.

The units can be easily moved about by means of concealed casters (**DIGYS evo** 10/30 kVA) and eye bolts (**DIGYS evo** 40/60 kVA).

Frontal access for all control parts and sub-assemblies, allowing installation close to a wall.

Electrical connections

► Easy network integration

All input and output connections are terminals located in the front of the unit. The rectifier and by-pass inputs can be common or separate.

Upstream cables and protections must be sized according to: load supply, battery charging and overload capacity.

Power kVA	Protection mains* A	Cable section* mm ²	Automatic by-pass input current A
1-phase			
10	63	35	45
15	100	35	65
20	125	35	90
3-phase			
10	25	16	18
15	32	16	27
20	40	35	36
30	63	35	54
40	160	50	72
60	160	50	108

* for your guidance.

Characteristics given for input and output for 3-phase 400 V + N.

Cooling

► Low heat loss

The high efficiency of **DIGYS evo** results in very low heat dissipation.

DIGYS evo is designed to operate in a wide range of ambient temperatures.

Nevertheless, for optimum performance and maximum battery reliability, it is recommended to limit the ambient temperature to 25 °C by suitable ventilation or air-conditioning.

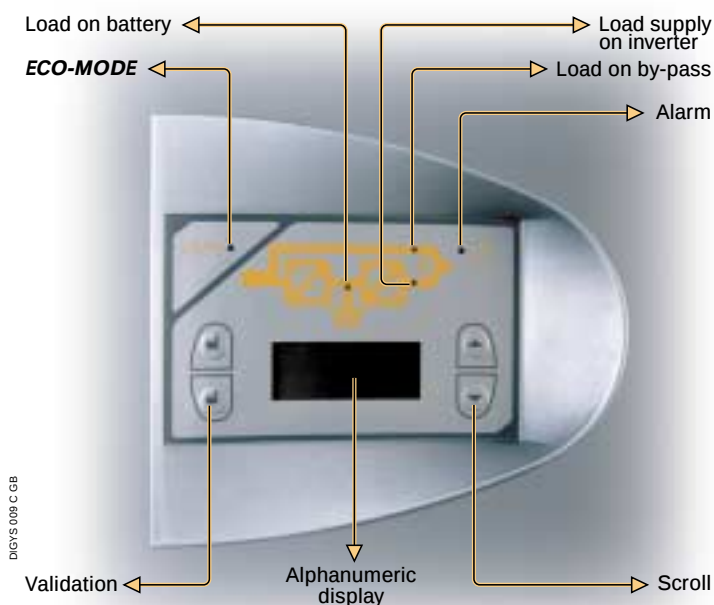
Power kVA	Heat dissipation*	
	kcal/h	BTU/h
10	560	2250
15	830	3300
20	1120	4450
30	1680	6700
40	2060	8200
60	3010	11950

* Characteristics given for input and output for 3-phase 400 V + N.

Advanced communication

Display and control

► A complete and user-friendly control panel



The microprocessor controlled mimic panel grants immediate control of the state of operation of the UPS on an array of LED indicator lamps and outputs detailed information on the display about:

- states and measurements,
- commands,
- parameter configuration.

DIGYS evo thanks to its powerful microprocessor, can give information on whether or not preventive maintenance is needed, depending on the actual working conditions.

Remote monitoring control panel

► Remote monitoring in close proximity to the user

The panel installed in the computer room is equipped with a display and gives access to all **DIGYS evo** functions (several languages are available, including Chinese and Russian).



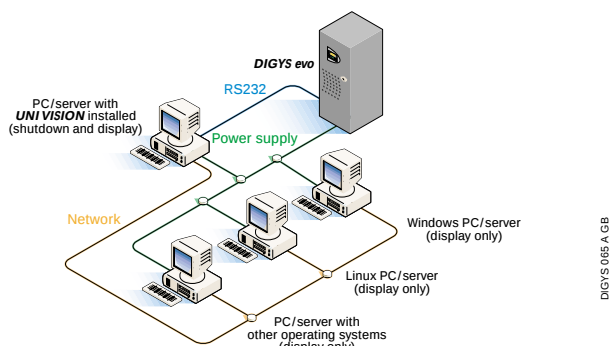
UNI VISION



UNI VISION, the advanced software downloadable from the Web (www.socomec-sicon.com).

The UPS can only be programmed from the PC/Server it is connected to. All the readouts can also be produced on all the other computers connected to the LAN. The main features are:

- local control through a Web Browser,
- automatic shutdown of PC's/Servers it is installed on,
- display in an "Events log" file of: main electrical measurements of the UPS, UPS events, program events.



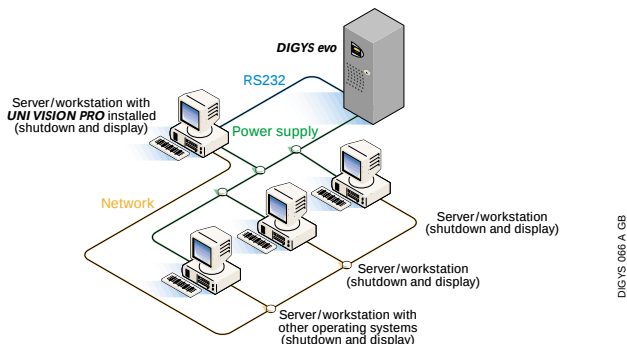
UNI VISION PRO



UNI VISION PRO, the professional software for business applications. It comes with the same features as **UNI VISION**, but with the possibility in addition of programming and performing automatic shutdown of Servers/Workstations connected to the network.

The UPS may also be programmed in remote mode by enabled Servers/Workstations in the network. The additional features are:

- shutdown command to networked Servers/Workstations via LAN,
- numerous operating systems supported,
- notification by e-mail in case of alarm,
- optional JSC (Java™ Shutdown Clients).



NET VISION



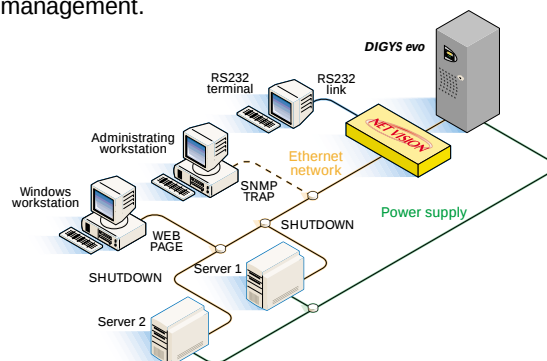
NET VISION, the network interface for enterprise applications.

The UPS behaves in exactly the same way as a network peripheral, capable of being managed remotely and, in turn, of managing shutdown of the networked Servers/Workstations.

Connection to the network via a common RJ45 connector makes this software extremely flexible and easy to use, thanks also to its HTML graphic interface.

Main features of **NET VISION**:

- remote diagnostic with automatic sending of reports and alarms through e-mail to the SOCOMEC SICON UPS local authorized service centre,
- control and management of the UPS through the Internet,
- management of the UPS in remote mode,
- SNMP management.



TOP VISION



► Monitoring with Windows NT station

TOP VISION, an exclusive and easy-to-learn tool that monitors one or more **DIGYS evo** units, together with other SOCOMEC SICON UPS equipment installed on your site. This tool incorporates a WEB server allowing remote access from any station connected to the Intranet network.

TOP VISION centralises all the equipment's data in order to transmit it via a single modem to the **CIM** supervision centre (Consultancy, Inspection & Maintenance SOCOMEC SICON UPS). This also offers both remote notification and diagnostic possibilities.

evo INTERFACE

► Communicating all the parameters and commands

The RS232 serial interface installed on board provide the user with all the information about **DIGYS evo** operation (status, measurements, alarms and controls) according to the JBUS/MODBUS protocol. It enables also communication with BMS (Building Management Systems).

Dry contact relay board offers moreover four alarm signals and two inputs in order to manage operation with generator set and emergency power off function. Other serial interfaces, dry contacts and input boards are also available as option.

Service and maintenance

► Round-the-clock security for your power supply

Given the UPS's vital importance, offering service quality is just as important as product quality.

CIM (Consultancy, Inspection, Maintenance) is a European network of more than 120 SOCOMEC SICON UPS engineers specialising in UPS maintenance.

This team is at the customer's disposal for:

- installing UPS equipment,
- preventive maintenance,
- corrective maintenance,
- a 24-hour diagnostic service,
- remote technical assistance,
- consultancy, design and implementation of installation modifications and updating.

Proximity

► For a rapid response



CARTE 13 C

The **CIM** team is present strategically not only in Europe, but also all over the world, so that no customer need ever feel isolated.

This guarantees the customer:

- rapid action,
- effective action, with a stock of original spare parts always on hand,
- UPS specialists at the client's disposal.

Training

► For optimized UPS management

SOCOME SICON UPS offers made to measure training for users of their UPS.

These training courses may be held either at the SOCOMEC SICON UPS training school, or at the customer's site.

TELESERVICE

► Permanent contact between **DIGYS evo** and the SOCOMEC SICON UPS maintenance service

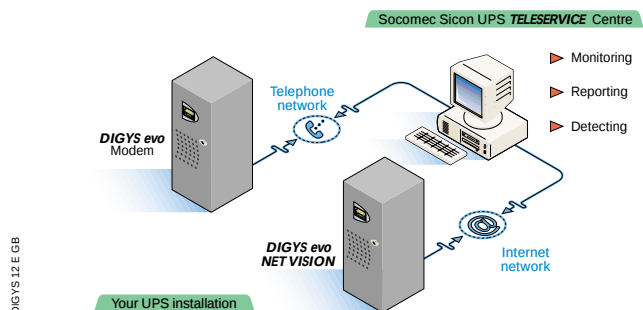
TELESERVICE is a SOCOMEC SICON UPS service that ensures effective prevention and constant monitoring of your **DIGYS evo**.

Connection to the **TELESERVICE** centre, unique of its kind, is established either through the phone line and modem or through a computer network (via **NET VISION**).

The **TELESERVICE** station:

- monitors the parameters needed for correct operation,
- informs on operating status of the **DIGYS evo** in periodic reports,
- detects any anomalies. Knowing status of the **DIGYS evo** from a distance helps establish a sure and complete diagnosis for a rapid and effective response.

SOCOME SICON UPS's **TELESERVICE** provides monitoring on a 24/7 basis, every day of the year, granting the customer complete peace of mind.



The advantages of **TELESERVICE**

► Customised services for guaranteed service continuity

Peace of mind: round the clock monitoring of the **DIGYS evo**.

Access to the status of your installation: reports inform the user about the parameters and modifications with comments from our specialists.

Fast, effective action: if a problem arises, **DIGYS evo** alerts the **TELESERVICE** station for immediate action.

Technical assistance via telephone: technical assistance for the following operations: UPS shutdown, load transfers, switching-off, etc.

Advice from specialists: to adapt your high quality energy installation to site evolutions.

Manufacturer know-how: the experience of specialists, who monitor your **DIGYS evo** system with the required know-how.

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SOCOMECSICON reserves the right to make any changes to data without prior notice.

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