

SALIENT CHARACTERISTICS OF PLC

The ECoMos software communicates with the system's PLC by GSM/GPRS modem

All functions are guaranteed and managed by a purpose built software package created by SIEL that works on the CPU of the PLC

SOME OF THE CHARACTERISTICS AND FUNCTIONS OF THE PLC FOLLOW

- Detection of data from the inverter and the field junction boxes
- Detection of environmental parameters (irradiance sensors, anemometric sensor, cell temperature sensor, environmental temperature sensor)
- Local diagnostics through html web pages on the PLC (server).
- Communication by SMS for any alarms considered critical
- Datalogger: data storage in csv format on compat flash devices in the case of connection failure with the GPRS system for a total of three days (depending on the complexity of the plant)
- Management of remote display

WHERE NECESSARY AND DEPENDING ON THE TYPE OF PLANT, THE FOLLOWING DEVICES CAN BE ADDED

- Status of switches in c.c. and c.a. including those in MT
- Insulation resistance monitors and thermometric monitors of the transformers
- Interface device: depending on the device, programmable relays can be acquired as digital input
- UPS status: remote detection of digitally input UPS status, whether battery or mains powered.
- The PLC also provides digital output which allows for remote control of all connected devices (e.g. motorized switches, START/STOP of inverters connected to a terminal)

REPRESENTATION OF THE CPU OF THE PLC

It is important to note that the hardware utilized can be modified according to the complexity and size of the plant, the number of inverters, the number of field junction boxes and the number of monitors one wishes to include



SIEL
ENERGY & SAFETY

Numero Verde Assistenza
800 602304

BR041E

SIEL S.p.A.
via 1° Maggio, 25
20060 Trezzano Rosa - Milano
Italy
tel. +39 02 90986.1
fax +39 02 90 96 84 90
www.sielups.com
info@sielups.com

UFFICIO ROMA
via Castelfranco Veneto, 18
00191 Roma - Italy
tel./fax +39 06 36381027

SIEL ENERGY SYSTEMS LTD
SIEL House
Unit E
Draycott Business Park
Cam
Glos.
GL11 5DQ
tel. +44 845 130 6118
fax +44 1453 899215
enquiries@sielups.co.uk

NITESCO LLC
Marksistskaya ul. 34/7
109147 Moscow - Russia
tel. +7 495 7925775
fax +7 495 7925766
www.nitesco.ru
nitesco@nitesco.ru

SIEL
ENERGY & SAFETY

ECOMOS
ENERGY CONTROL & MONITORING SYSTEM

Questa pubblicazione ha soltanto scopo informativo.
L'azienda persegue una politica di continuo miglioramento del prodotto, perciò si riserva il diritto di variare qualunque informazione riportata senza preavviso.
In the interests of product improvement SIEL reserves the right to change specifications without notice.

MISSION STATEMENT

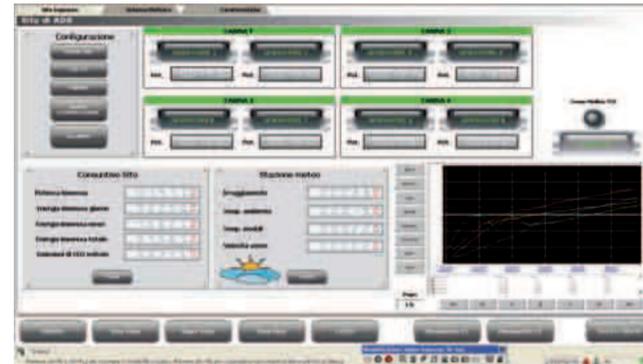
The Energy Control and Monitoring System (ECoMoS) is a new remote controlled system from SIEL that allows PV systems to be monitored automatically.

THE SYSTEM IS MADE UP OF THE FOLLOWING ELEMENTS:

- A Siel Siac Soleil inverter with relative parallel boxes
- An intelligent unit called a PLC which detects and monitors all connected devices in its radius (inverter, parallel boxes, analogical and digital input and output)
- Monitoring software and relative system data storage on the SIEL database or on the client's p.c.

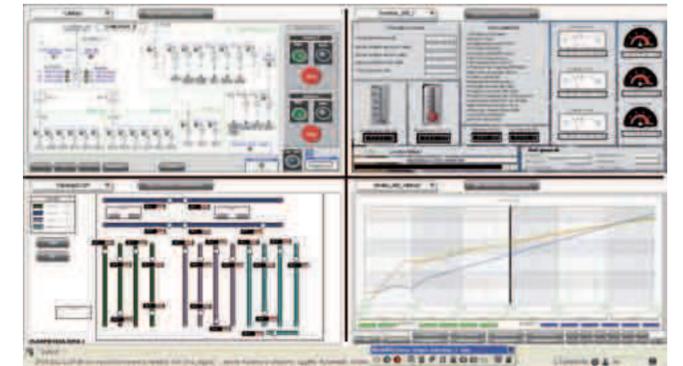
PRINCIPAL CHARACTERISTICS OF THE REMOTE MANAGEMENT SOFTWARE

- Remote management via internet for the visualization and management of data
- Power analysis
- Graphic representation of INVERTERS: visualization of measurements and status indicators (synopsis of alarms and events)
- Graphic representation of TRENDS (current and previous) relative to each single inverter and to the website for the recording and analysis of the system's data
- Alarm management (notification by e-mail and SMS). Reporting and alarm detection also possible
- Schedule analysis (notification by SMS and e-mail according to work schedule)
- Data presentation in various formats: csv, excel ...



REPRESENTATION OF SYNOPTIC PAGE OF WEBSITE

The synoptic page represents the website from which it is possible to access the page relative to the station, that of each inverter being monitored, and at a further level the pages of the relative field junction boxes. On every page the system status can be visualized and the pages concerning alarms, trends and advanced settings and functions can be accessed.



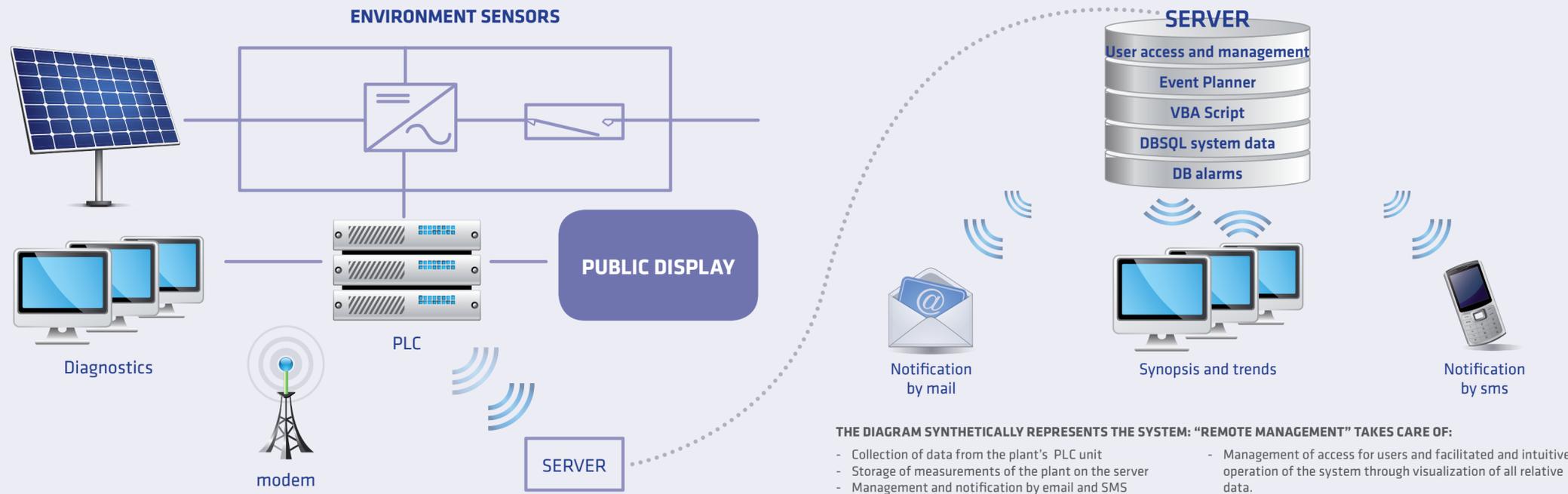
REPRESENTATION MULTI VIEW

1. Plant and station status
2. Values and status of inverter
3. Plan
4. Trend of measurements

The system allows for various types of navigation between the synoptic pages. Up to four different screen images, even of different systems, can be viewed at any one time.

The remote management software allows for a high degree of personalization of both its functioning and layout.

SYSTEM LAYOUT



THE REMOTE MANAGEMENT SOFTWARE

The representation of the synoptics of the system allows for navigation at various levels. From every synoptic page it is possible to analyse the system's status so that the right decision can be made effectively at any given time.

AT START-UP THE SOFTWARE DISPLAYS THE MAIN PAGE FROM WHICH ONE CAN:

- Get an overall view of the system
- Visualize the status of the system
- Configure the system
- Visualize the previous and current status of alarms
- Visualize the general diagrams
- Access the monitored sites divided according to region or area