



code KS12700001.300

Description and functionalities

Ksenia Security has developed the **energia** module that allows you to **monitor** electricity consumption and energy production (e.g. photovoltaic) and **process** the collected data to obtain charts that show the **balance** between energy production and consumption, the values relating to power peaks, of both production and consumption, and the **difference** between energy production and energy consumption, in different time spans ranging from day (per hour), to month (per day) and to year (per month). The charts show the historical consumption and production that allow the analysis of the power consumption trend, with the aim of identifying the appropriate interventions to avoid inefficiencies and to increase **Energy Efficiency**.

Power consumption management is implemented starting from the data collected by **energia** module that a logic application processes, structures and stores and finally shows the result of energy consumption and production trends to the users, in the form of bar charts, in the user **lares 4.0 App**.

Why energia

Because it has the requirements to respond to requests for energy efficiency enhancement;

because it can measure and manage the power consumption on each of its two lines, each line can support loads up to 6kW;

because it can control the power consumption trend through bar charts, for an immediate analysis;

because it can program two thresholds: a notice one and a loads disconnection one (if programmed). Both of them can be used to send notifications to the user;

because it can control the status of household appliances in real time (connected/disconnected) from lares 4.0 App and Maps;

because it is provided with 4 free configurable outputs relays;

because it can be linked to the control panel via the KS-BUS, quickly and easily.



Analysis of the power consumption trend

Energy Efficiency

- **energia** BUS peripheral allows to manage the power used in a single-phase electrical system, on each one of its two lines and it will prevent a total disconnection if an overload occurs in the system.
- The overload is controlled by two programmable thresholds (one indicates excessive consumption, the other one the load disconnection risk); when the disconnection threshold is exceeded, the **energia** module disconnects the loads in sequence, according to the configured planning.
- **energia** module provides two distinct power lines on which measuring both voltage and current, each line can support loads up to 6kW.
- **energia** module has 4 outputs relays (220V, 1A) which can be used both to drive external relays for overloaded circuits disconnection and as generic outputs of the control panel.
- **energia** module must be linked to the lares 4.0 control panel via the KS-BUS.



Load Management

Quantity data

lares 4.0 models	wls 96	16	40	40 wls	140 wls	644 wls
Maximum number of energia modules	1	-	1	3	6	6
Maximum number of programmable meters	2	-	3	6	12	18
Maximum number of outputs programmable as "Manageable load"	4	-	4	4	8	8

Technical data

Power supply	100-240Vac - Maximum consumption 0.5W
Power supply	12V - Maximum absorption 100mA
Maximum power	2x6kW (if 220Vac) - 2x3kW (if 110Vac)
Number of output relays	4 (250V - 1A)
Interface	KS-BUS
Dimensions	3 DIN modules (90x53x62 mm) / DIN rail mounting

Compliance
• Europe - CE, RoHS

