Smart Plug

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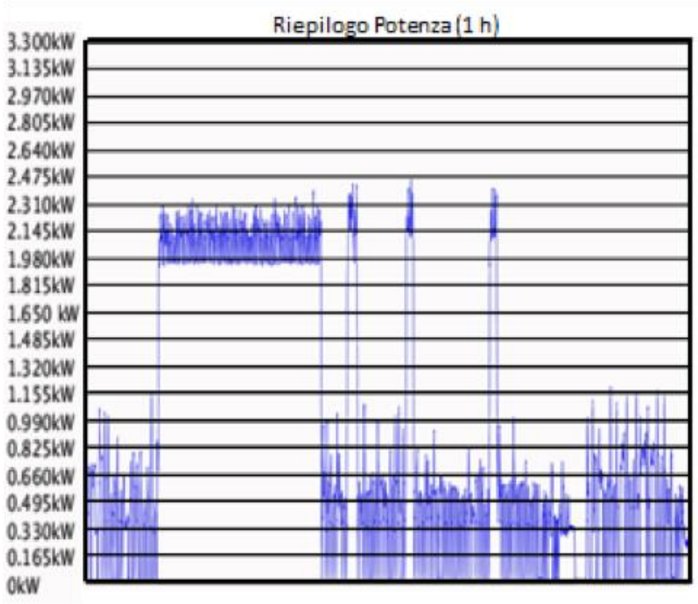
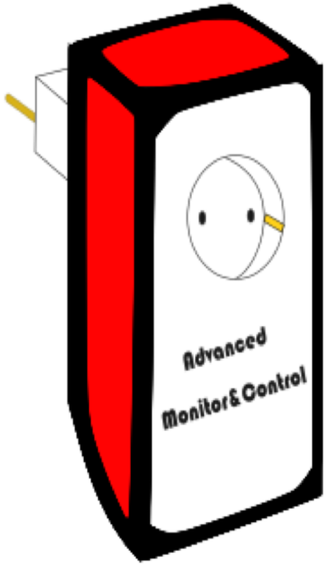
Invention

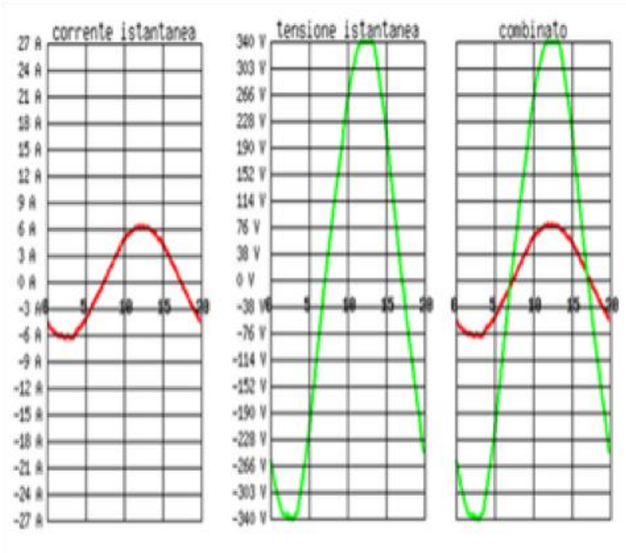
This invention consists of a socket capable of monitoring numerous descriptive parameters of the operation of an electrical load or several electrical loads and of communicating with a control platform, controlled by the user, capable of sending commands to the socket and carrying out in-depth data analyzes received as the Voltage Quality and Power Quality.

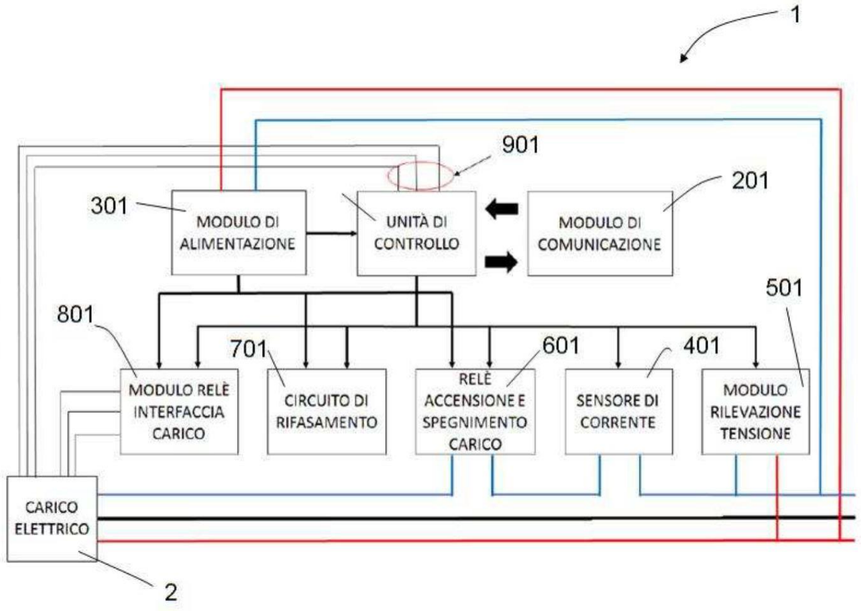
The socket object of the invention is able to acquire in real time the instantaneous voltage and current samples of a load or a set of loads connected to the socket, perform one or more analyzes and send the processed data to a control platform that , by means of specific algorithms, it carries out further operations in order to identify both the characteristic electrical parameters of operation and complex phenomena inherent to Power Quality and Voltage Quality, currently performed by oscilloscopes and network analyzers. The same socket then performs the various tasks given by the control platform in response to user commands. Finally, the socket can be advantageously configured to connect directly to the control board and / or relays of the load or of the set of loads in order to achieve more efficient energy control.

Drawings & pictures









Industrial applications

The invention can find application in civil and industrial plant engineering, as well as be usefully used by the household appliance manufacturing industry, as well as - more generally - in the energy sector to implement smart grids or perform diagnostic services.

The advantages ensured by the patented technology consist in improving the performance of an electrical load, in favoring energy savings and in implementing voltage and power quality, even through remote control.

Possible developments

The patent is available under an exclusive and non-exclusive license. The licenses are available for the entire remaining term of the patent titles.

The research group is available for new research activities in collaboration and on behalf of third parties, technical insights, scientific advice, also aimed at raising the TRL of technology.

The TRL of the invention is 5/6.

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