BROCHURE EP-X

Energia Europa

THE COMPANY

Energia Europa develops and produces ***innovative systems for the energy efficiency*** *of production sites, retail stores and office units. The heart of its production is represented by the* ***patented EP-X system****, which allows the achievement of real efficiency in an electrical line, and therefore true energy saving with equal output.*

Energia Europa recently incorporated a business unit specialized in the design and development of high quality LED lighting for industrial and urban applications, with the E-Lampsy brand.

ENVIRONMENTAL SUSTAINABILITY

Given its capability to produce true energy saving, the EP-X device allows the reduction of CO_2 emissions, so contributing to the environmental sustainability of the sites. Each kWh saved means minor CO_2 emission equal to about 0.400 kg!

ENERGY EFFICIENCY
EP-X

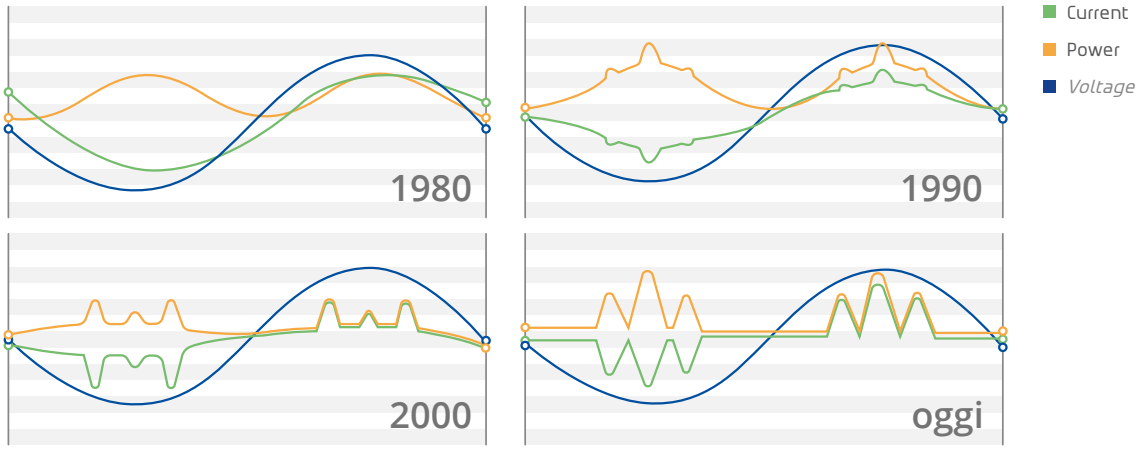
The Energy Efficiency division of Energia Europa develops and produces innovative systems for the energy efficiency of production, commercial, executive and residential sites.

The pulsing heart of our production is represented by the patented EP-X system, an innovative device entirely designed and developed internally that allows to achieve true efficiency in an electrical system, that is, a real energy saving at equal output. With over 1,200 installations throughout Europe, EP-X is the solution chosen by some of the largest and best known international Groups both in the manufacturing world and in the commercial world.

POWER QUALITY CONDITIONER - THE TECHNOLOGY

The patented EP-X system is an innovative filter designed for the reduction of the losses and disturbances on the line through the modification of the current waveform. Technically speaking, it is a series passive inductive filter with hybrid functions, given by its capabilities to inject into the power flow some electromagnetic vectors in opposition of phase. The filter utilizes some of the voltage derived from the incoming energy flow, causing a proportional voltage reduction. The inductance, therefore, is not constant, but it changes dynamically its filter impedance value adapting to the power absorption of the electrical network, so maximizing its effectiveness. Since the EP-X only has reactive components and contactors, there are no losses produced by the system and the self-consumption is practically undetectable.

WHY USE IT



Until the 80's, in all industrial and commercial sites the linear loads were largely prevalent; that is, electrical loads not influenced by power electronics.
At the end of the 80's the electronic components become smaller and more efficient. New effective technologies linked at the electronic control of power are emerging, which generate a positive impact on energy consumption but a negative one on the power quality.
Since the years 2000, the global electrical energy consumption is constantly increasing at a very fast pace; energy produced by renewable sources is increasing as well, with a negative impact on power quality too.
Today in the production sites the non linear loads regulated by power electronics are largely prevalent.

It becomes essential to save energy through the optimization of energy transmission and the improvement of power quality

EP·X

BENEFITS

ENERGY EFFICIENCY:
reduces the losses and disturbances in the electrical network bringing true energy efficiency on the line; improves power quality and increases the life cycle of the loads.

REDUCTION OF EMISSIONS:
each kWh saved is equal to about 0.400 kg of lower CO_2 emissions in the atmosphere *.

ENERGY SAVING:
reduces energy consumption always ensuring the same amount of work, generating a financial saving between 3% to 6%, according to the kinds of loads which are connected to the line.
The results are scientifically measurable thanks to the patented Bypass system and the data retrieval and transmission ensured by the E-Controller device.

* Conversion factor by ISPRA
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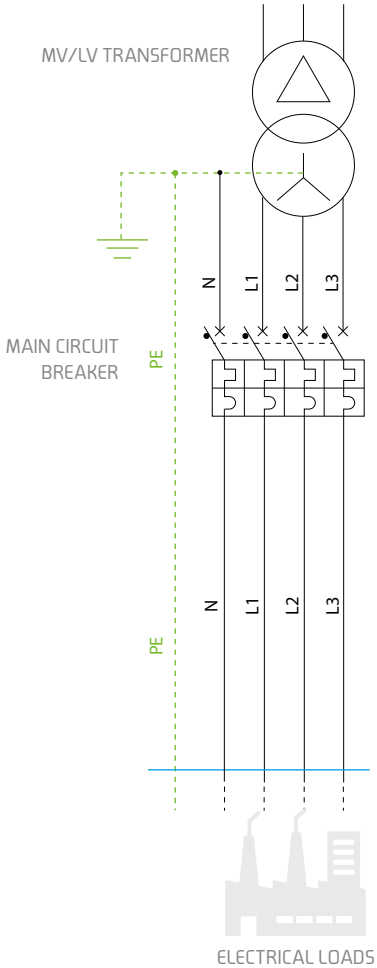
THE PATENTED BYPASS

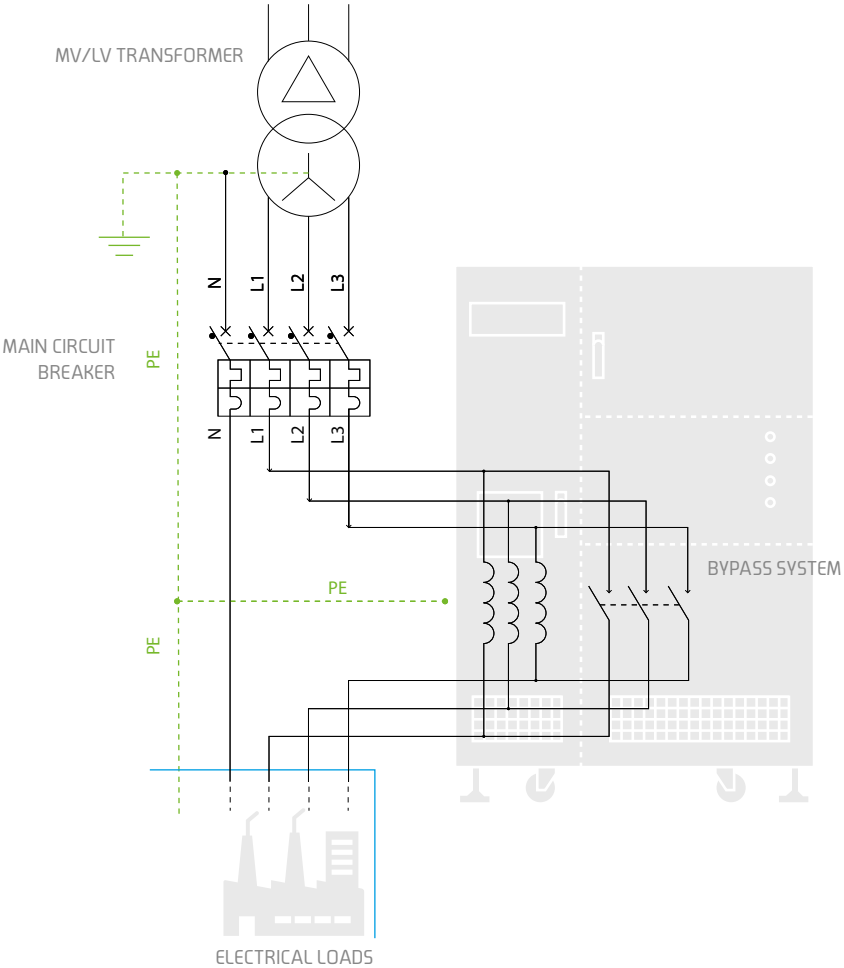
SAFETY

The EP-X is a 100% safe technology thanks to the 24 hours remote control and its patented Bypass system that automatically excludes the EP-X from the line in case of malfunctions, thus ensuring continuity of power supply to the loads, avoiding any disruption.

MEASURABILITY

The Bypass and the measuring instruments inside the EP-X system, allow to activate and deactivate the technology, objectively highlighting the difference of power absorption between the two modes, saving and bypass.





PERFORMANCE MEASUREMENT

The verification of the energy savings obtained with the patented EP-X system is realized through a measurement protocol implemented after the installation and formalized with the successive sending of an “Energy Efficiency Report”.

The protocol for the verification of the performance has been developed with the cooperation of leading Italian universities and it is and is validated by the prestigious international certification body **IMQ**.

The protocol is based on the combination of a double analysis of the data collected during the test performed on 3 different days of the week with the implementation of a series of programmed switching between the 2 modes – *EP-X in Saving and EP-X in Bypass* – every 5 minutes for 24H: the quantitative analysis (measurement in energy) and the qualitative analysis (measurement in power). The qualitative analysis is used by the analysts to qualify the raw data collected by the measurement in energy.

INSTALLATION

The EP-X device must be positioned between the transformer and the loads. **It can be installed both downstream or upstream the main breaker**; in case it is positioned upstream the breaker a magneto-thermic protection should be installed as well, which can be both external or integrated within the EP-X unit.

OUR RESULTS

EP-X

508,500,000 kWh	193,600,000 kg*	4.20%
Energy saved	*CO_2 saved*	*Average saving*

Aggregate efficiency data for major application sectors

RETAIL

116,500,000 kWh	46,500,000 kg*	4.60%
Energy saved	*CO_2 saved*	*Average saving*

MECHANICAL INDUSTRY

36,800,000 kWh	14,700,000 kg*	4.20%
Energy saved	*CO_2 saved*	*Average saving*

PLASTIC AND RUBBER INDUSTRY

49,200,000 kWh	19,700,000 kg*	4.00%
Energy saved	*CO_2 saved*	*Average saving*

AUTOMATION AND AUTOMOTIVE

11,400,000 kWh	4,600,000 kg*	3.90%
Energy saved	*CO_2 saved*	*Average saving*

FOOD & BEVERAGE INDUSTRY

26,500,000 kWh	10,250,000 kg*	3.50%
Energy saved	*CO_2 saved*	*Average saving*

HOTELS & RESTAURANTS

9,300,000 kWh	3,740,000 kg*	5.00%
Energy saved	*CO_2 saved*	*Average saving*

LOGISTICS & OFFICES

5,900,000 kWh	2,390,000 kg*	4.30%
Energy saved	*CO_2 saved*	*Average saving*

Updated to January 2025

** Emission factor 0.400 kg/kWh – by ISPRA Report 2022*

EP-VISION PLATFORM

The validity of an energy efficiency project must also include the possibility of monitoring electrical consumption, both to assess the performance of EP-X devices in terms of increased efficiency and to identify potential areas for improvement, thus optimizing performance over time.

The new EP-Vision platform, comprehensive, reliable, and intuitive, allows individual customers to verify the performance of their own system while EP-X is operational by providing data related to the efficiency improvement of the electrical system and those related to external benefits.

It incorporates two existing applications: **E-Power NOW** for real-time monitoring and control of machine performance and electrical parameters of the optimized line, and the **SAT**. The latter provides reporting and reporting of the results obtained in terms of energy, economic, and environmental benefits from one or more machines installed within the desired time interval, accessing the data stored on the server.

EP-Vision

e-powernow

S.A.T.
Smart Analytics Tool

E-POWER NOW SOFTWARE

The interface software with EP-X: friendly, immediate, efficient and interactive. Through this application the user will be able to verify immediately the performance and the results produced by the EP-X system.

CHECK

The user is able to check immediately the performance of the EP-X device, in terms of energy efficiency and environmental benefits.

MONITORING

The user is able to monitor in real time all the main electrical parameters on the line.

UPDATE

The user is able to receive weekly automatic updates on all requested data and set a fast interactive channel with Energia Europa.

e-powernow

For pc, tablet, and smartphone

Download on the App Store

GET IT ON Google Play

S.A.T.
Smart Analytics Tool

SMART ANALYTICS FOR SMART REPORTING

The new cloud-based software platform that allows access to the EP-X data in the cloud for a simple, effective and complete reporting service.

FUNCTIONS

- *It allows **immediate access to energy, economic and environmental data** generated by EP-X and stored in the cloud: energy consumed, energy saved, economic benefit, environmental benefits, power quality.*
- *It provides the possibility to **select and aggregate data from multiple EP-X installed** in different cabins or sites and to display all data in the desired time intervals.*
- *Provides the ability to **download instant reports** for the selected devices or, optionally, to schedule the sending of the report to multiple recipients in the desired time intervals.*

CERTIFICATIONS

01. 02. 03. 04. 05. 06. 07. 08. 09.

01. ISO 9001:2015, ISO 14001:2015, UNI CEI 11352:2014, ISO 45001:2018.

02. Short circuit tests according to the international standard IEC/EN 61439-1-2.

03. Patent 1: EP-X System protected by international patent N. PCT/IT2011/000275.
Patent 2: Bypass System protected by international patent N. VI2007A000272.

04. The EP-X system is in compliance with the Low Voltage Directive, 2014/35/EU.

05. CE Mark in accordance with IEC/EN 61439-1-2.

06. RCM Mark for compliance with Australia and New Zealand safety requirements.

07. UL Mark for compliance with US and Canadian safety requirements. The UL mark guarantees approval and recognition worldwide.

08. Electromagnetic compatibility according to IEC/EN 61000-6-2 and IEC/EN 61000-6-4.

09. Compliance of IEC/EN 50449 regarding the evaluation of workers exposure to electromagnetic fields produced by EP-X systems, tests of the Fault Loop Impedance.

ESCo Credited Company

THEY TRUSTED US

In the last years we had the fortune to win the trust in our solutions of many international clients; some of them are among the best known brands.

- **Autogrill S.p.A.**
- **Beretta S.p.A.**
- **Cameo S.p.A.**
- **Coop S.p.A.**
- **Cornaglia S.p.A.**
- **Esselunga S.p.A.**
- **Findus S.r.l.**
- **Forgital Group S.p.A.**
- **INFN**
- **Mikron S.r.l.**
- **Peroni S.r.l.**
- **Siemens S.p.A.**
- **Technogym S.p.A.**

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