

NEW DIMENSION OF ELECTRICAL INSTALLATION SYSTEMS

NODISEA

Energy efficient integrated protection and control devices

Mag. Tomaž Berginc,
President of the Management board,
ETI Elektroelement Izlake,
Slovenia

Power needs control

Facts

ETI is one of the **5** world's leading producers of **safety fuses** and among **leading producers of switchgear**

Over **500** companies trust us with protection of their property and safety of their clients.

ETI's branch offices are at your service in over **60 countries** of the world.

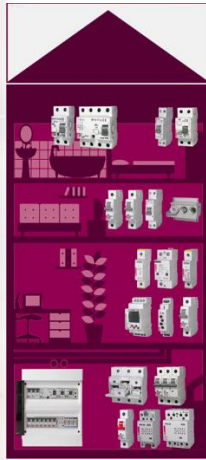
ETI's products are being manufactured in **13 countries** across the world.

ETI concern has established subsidiaries in **11 European countries**.

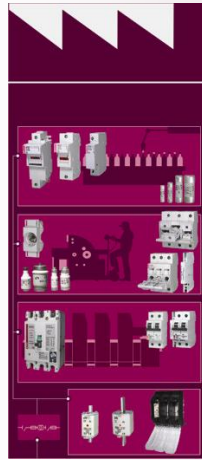
Power needs control

We provide solutions for:

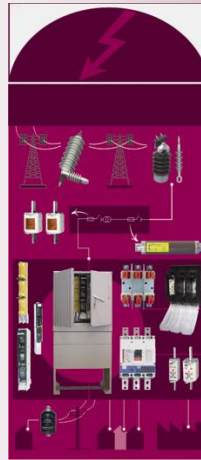
ETI



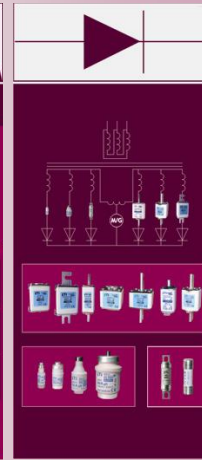
Residential and commercial installations



Industrial installations



Distribution of electric energy for low and medium voltage



Power electronics, semiconductors and special purpose applications

Fundamental strategic directions

ETI

Further internationalisation

ETI will use the sources of competitive advantage for its breakthrough among the leading manufacturers in the field of safety fuses

New products in the area of switching equipment will ensure for ETI stronger position among the producers of switching elements

Strengthening cost-efficiency

Competent and motivated employees are of vital importance in order to successfully carry out the strategy

System integrator (solutions for electrical installations in the form of "turn-key" projects)

Power needs control

Core competences

ETI

- Development & production of:

- miniature circuit breakers MCB's
- residual current circuit breakers RCCB's
- Fuses, Low Voltage & Medium Voltage
- technical ceramics for fuses & other applications
- Design and production of tools and assembly lines, required for production of ETI products.



Power needs control

Environmental Trends & Objectives

ETI

- EU TARGETS 2020:

- 20% less greenhouse gases
- 20% renewable energy
- 20% more energy efficient

- Energy efficiency:

- In network & consumer appliances
- In all protection & control devices

- Higher level of protection against electrocution & fire,

- New technical requirements because of new energy sources:

- e.g.: PV PhotoVoltaics systems involves DC direct current and DC Voltage up to 1000V

ETI respond ??

Power needs control

New (NOva-slo) DImension of **S**ystems of **E**lectrical **A**pparatus

Project objectives:

- Energy efficiency increase with lower power-loss of apparatus
- Technological breakthrough at all partners, less pollution & waste,
- Higher protection level in el. installation with less number of installed devices by:

ETI & Partners:

- Iskra MIS
- Iskra Mehanizmi
- Iskra Zaščite
- Varsi

- integration of functions in one device,
- less materials used

Power needs control

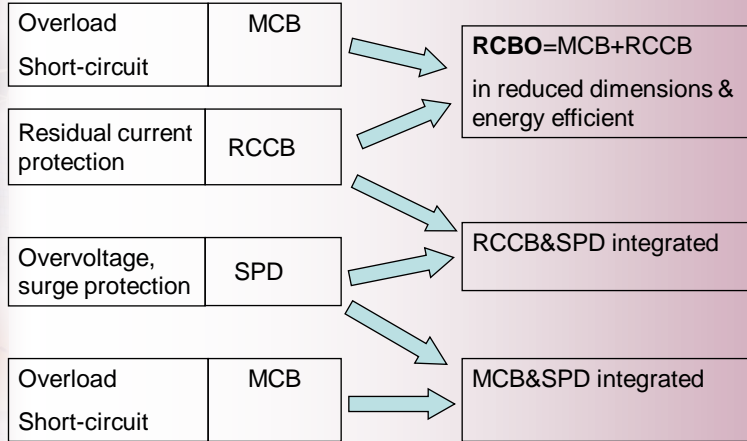
-Product objectives:

- MCB miniature circuit breakers with efficient low-power-loss tripping system,
- RCBO's residual circuit breaker with integral overcurrent protection acc. to different market requirements: e.g.
 - KZS2M2p > IEC/EN 61009-1
 - SMRCBO > IEC 61009-2
- RCCB with integrated overvoltage protection
- RCCB's with lower fault current protection
- Fuses for new application in networks with renewable energy sources, DC applications,
- Special filters with SPD (Surge Protection Devices)
- Bistable switches with reduced power consumption

Power needs control

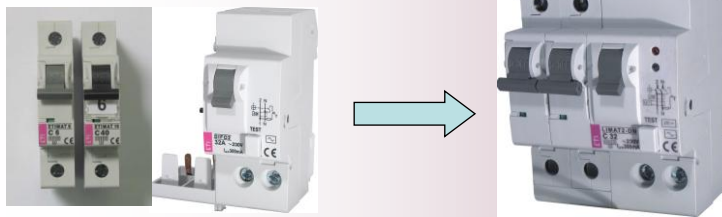
Protection functions & devices

NODISEA products

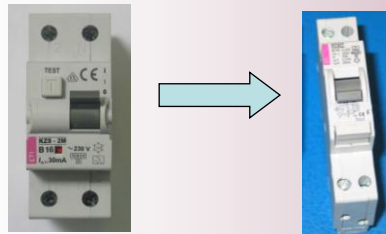


Power needs control

- Example: integration of functions



Example: decrease of dimensions



Power needs control



Naložba v vašo prihodnost
OPERACIJA DELNO FINANCIRANA EVROPSKO UNIJO
Evropski sklad za regionalni razvoj

Project NODISEA

ETI

Consortium NODISEA



R&D institutions:

- Institut Josef Stefan
- UNI-LJ: FE
- UNI-MB: FERI
- ICEM-TC
- TC-SEMTO

Power needs control



Naložba v vašo prihodnost
OPERACIJA DELNO FINANCIRANA EVROPSKO UNIJO
Evropski sklad za regionalni razvoj

Project NODISEA

ETI

NODISEA in numbers:

Total project costs: 7.038.544.-EUR

- 60% R&D activities
- 40% investment in equipment

Contribution of consortium: 3.990.792.-EUR or 53%

Subsidized share: 3.047.752.-EUR or 47%

project costs shared between partners:

- ETI	2.920.262.-EUR	or 41.5%
- IskraMIS	1.082.458.-EUR	or 15.4%
- IskraMehanizmi	1.579.814.-EUR	or 22.4%
- IskraZaščite	998.550.-EUR	or 14.2%
- Varsi	457.460.-EUR	or 6.5%

Power needs control



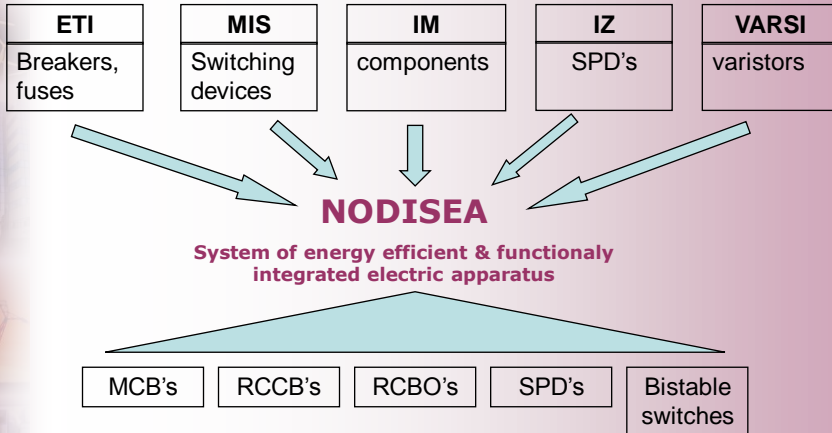
Naložba v vašo prihodnost
OPERACIJO DELNO FINANCIRA EVROPSKA UNIJA
Evropski sklad za regionalni razvoj

Project NODISEA

ETI

-Impact in Slovenia:

- Consortium is based on Complementary Core Competences of partners



System of energy efficient & functionally integrated electric apparatus

Power needs control



Naložba v vašo prihodnost
OPERACIJO DELNO FINANCIRA EVROPSKA UNIJA
Evropski sklad za regionalni razvoj

Project NODISEA

ETI

-Impact to international markets:

- All products will be sold as a system or individually to EN/IEC markets,

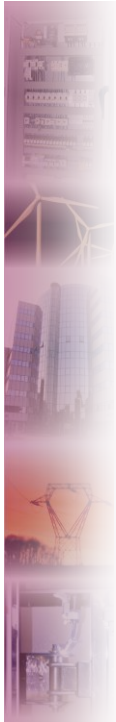
- Consortium will impose even stronger export orientation to slovene electrotechnical industry,

- Partners in consortium will use the Cenelec & IEC bodies to promote new technology in new standards through technical work in standardisation bodies,

- Each of partners is not big enough to fight against very big players,

- Consortium NODISEA will be stronger and has better chances to be successful.

Power needs control



ETI Values

ETI

