



**SEL**

**POWER DISTRIBUTION SOLUTIONS**

[www.sel-electric.com](http://www.sel-electric.com)

“Experience and Innovation at Your Service”  
Totally Designed, Developed and Manufactured in Italy

**COMPANY  
PROFILE**



# SEL

SEL is a manufacturer of MV switchgears and equipment, for primary and secondary distribution up to **40.5kV** and **31.5kA**.

SEL is **ISO 9001:2018** certified.

## EXPERIENCE AND INNOVATION AT YOUR SERVICES, FROM THE IDEA TO ITS APPLICATION

Following this concept we have always designed our products focusing our attention to their application, so that "from the idea to its application" is not only a slogan but it has always been our method of job shared by all the components of the Company.

### ***A Family Switchgear Company***

The 2 brothers Alessandro and Leonardo Leporatti, established SEL in 1988 sharing their father Giorgio's experience in the business started back in the 60's.



# MILESTONES

**1988**

## Foundation of SEL

Founders of SEL , Alessandro and Leonardo Leporatti, could take advantage from their experience in the family business that their father, Giorgio, started at the beginning of the 60's and where they realized big electrical plants of every kind.

They started in a small workshop collocated in the countryside from the windows of that it was possible to admire the hills where the famous genius Leonardo da Vinci was born.

The activities continues as the previous family Company.

During these years relevant events are carried out...

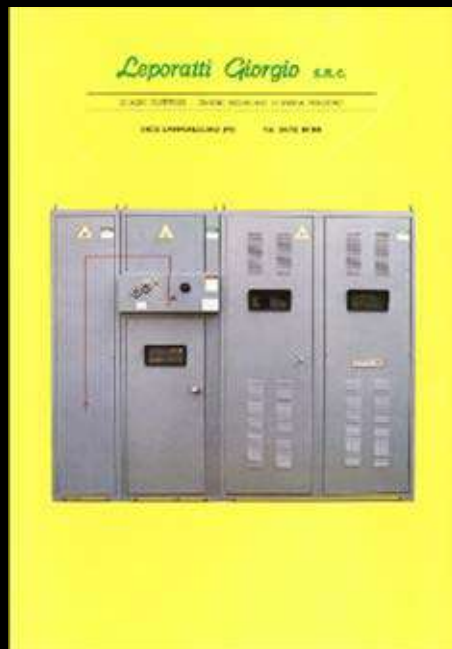
**1994**

## Developing original business and new solution in MV switchboards.

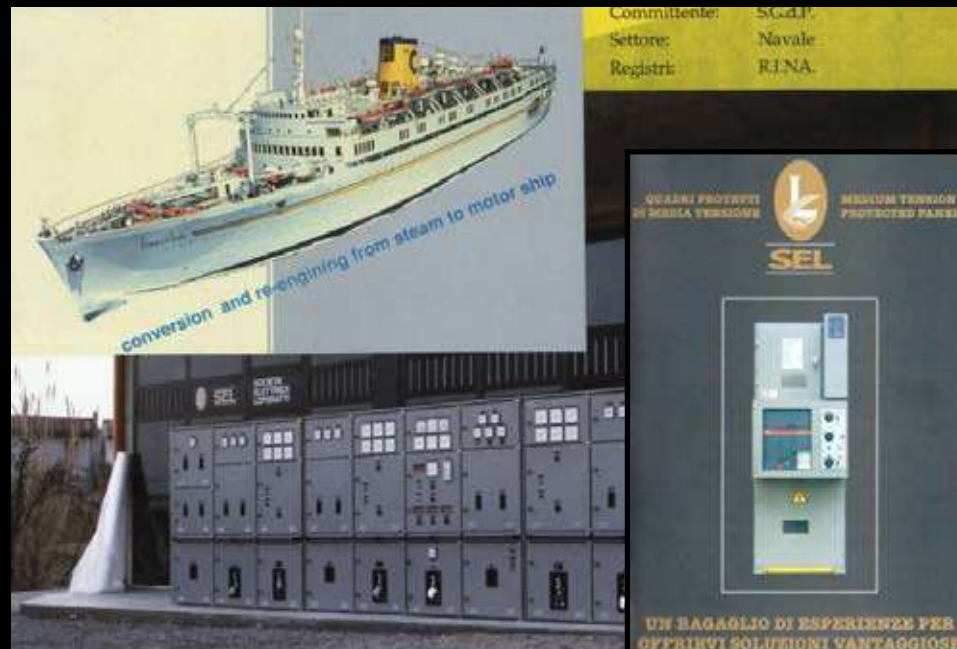
From the foundation date up to 1994 SEL continues to develop the previous family traditional business realizing big plant for generation, distribution and automatization including main switchboards for navy. Further SEL introduces new solutions in the MV switchboards, revolutionizing the market by providing two times more compact solution for MV substations.



Giorgio Leporatti while is inspecting a M.V. Switchboard



The First Catalogue of M.V. Panel





## 2001-2

SEL starts to export into Chinese market



SEL G.M. Mr Alessandro Leporatti registers the patent of TPS product at SHANGAI PATENT AND TRADEMARK LAW OFFICE



Sel Technical Director Mr. Leonardo Leporatti reTest the TPS Product according with Chinese standard at Xian Laboratory

## 2001-2

SEL Headquarter

Located in Lamporecchio



## 2002

SEL registered its Logo

According with Madrid Agreement and protocol



## 2003

SEL research and Development department

Sel annually invests 10% of corporate resources in its department of research and development, providing innovative products.

**2006**

SEL becomes a private limited company

**2006**

SEL opens a new branch in BULGARIA

**2011-12**

**New Building**

SEL has much expanded its factory and implemented a new production layout



**2024**





**PRODUCTS**

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**HISTORY**



# TPS 24KV - 21KA - 630A (1250A)

1996

## TPS (Three Position Switch).

SF6 insulated, rotative 3 position switch, completely developed and designed by our R&D. TPS is a turning point because it qualifies SEL as a MV Equipment manufacturer, allowing growth and success in the export market and putting the focus on MV switchgears.

2004

## TCB

Vacuum technology MV CB. Designed and manufactured at SEL premises according to 62271-1. Vacuum bottle fully incapsulated in cast resin. Bushing pole design to enable reduced size compared to market standards. This Equipment definitely stated the complete technological independence of the Company.

2006

## Range completion and new solutions

compact CB module W=375mm, 15 years ahead of the market

2013

## Further development.

Specific solutions for middle east market



# RMU TPR6 24KV

# 24KV - 25KA - 630A (1250A)

2004

## TPR6 24

SEL introduces TPR6 24kV, GIS RMU. Compact and modular versions available..

2007

## Range development TPR6 24

During this time we have designed and realized a complete TPR6 24kV gamma for all type of applications.

2015

## TPR6 24 new upgrade

Further technical upgrade. Increase of performances with outdoor IP54/55, 25kA 3s, no current derating up to 55°C, new arrangements





# RMU TPR6 36 - TPR6 HP

2009

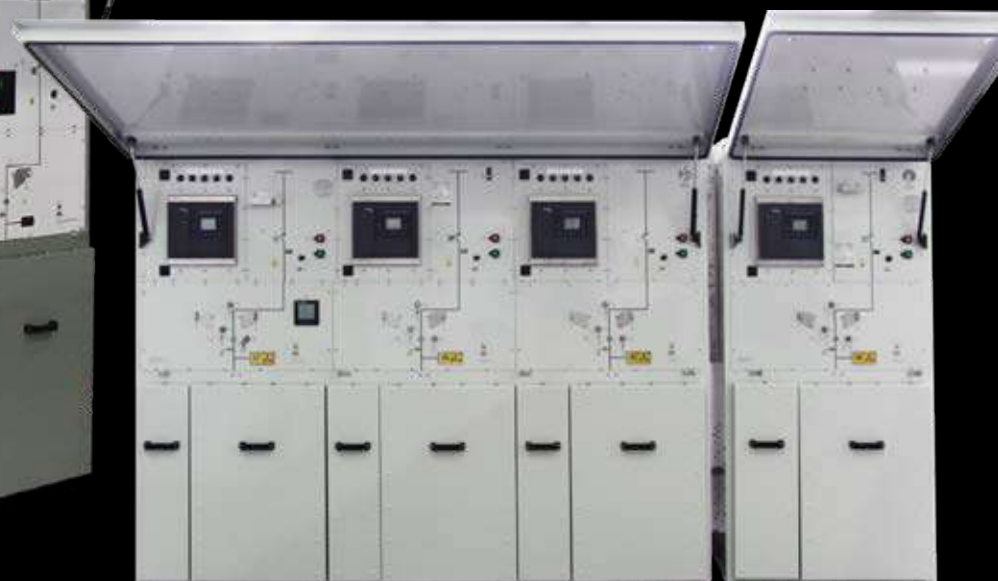
## TPR6 36

MV Switchgear RMU type 36 kV, 20 kA. Compact and modular solutions. Indoor application.

2012

## TPR6 HP

Evolution of the product that widens the range and reaches high performances:  
up to **40.5kV, 25kA 3s**,  
**NO CURRENT DERATING UP TO 55°C**,  
**OUTDOOR IP 54/55**,  
Upwards and downwards gas venting.  
First MV switchgear with integrated outdoor execution ever introduced in the market



# GIS TPR6 HP PLUS - Primary Distribution



## TPR6 PLUS

Up to 24kV 1250A, 25kA 3s.



## TPR6 HP PLUS

Evolution of the previous TPR6 PLUS with upgraded design and increase of performances up to 36kV, 2000A, 31.5kA 3s.



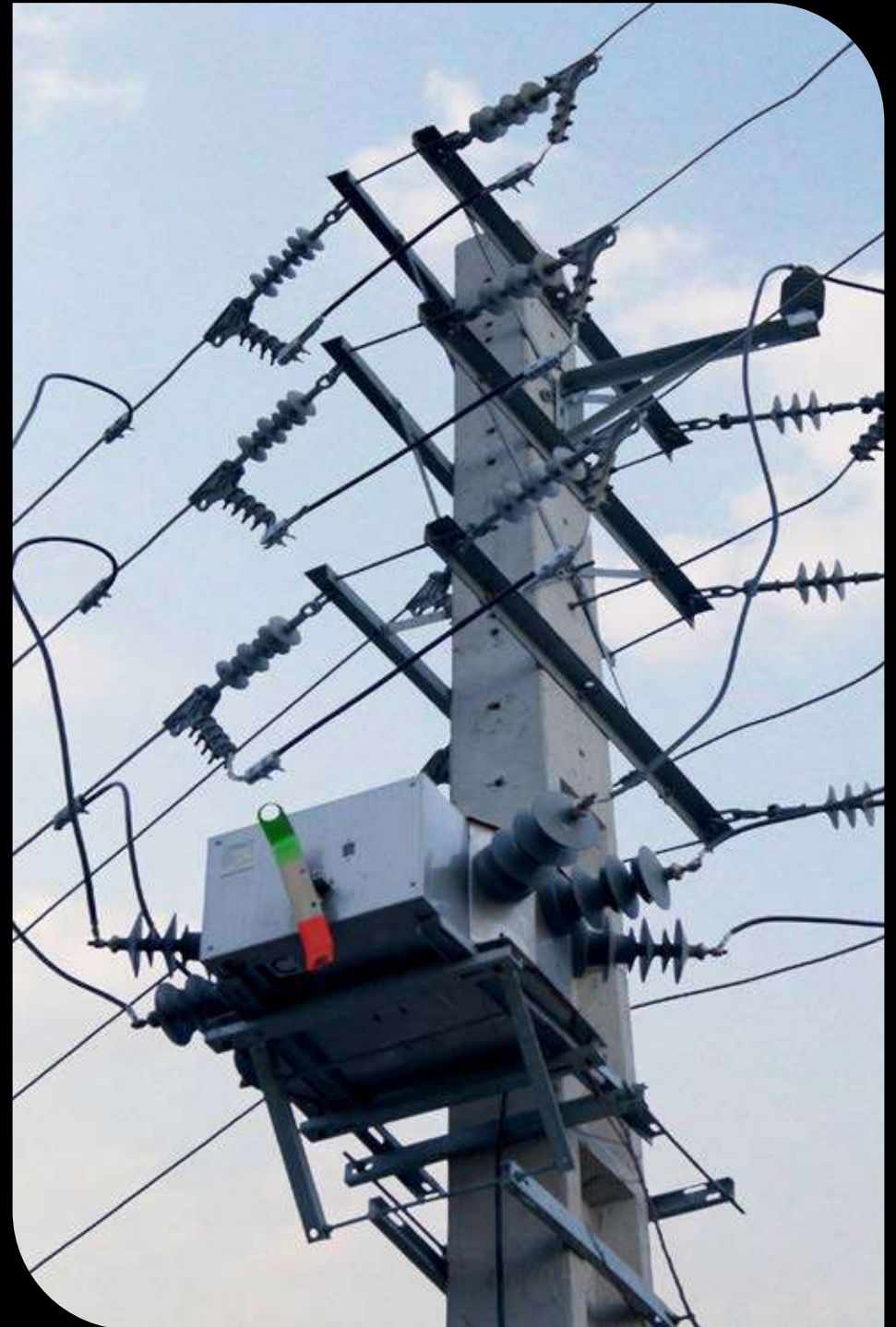
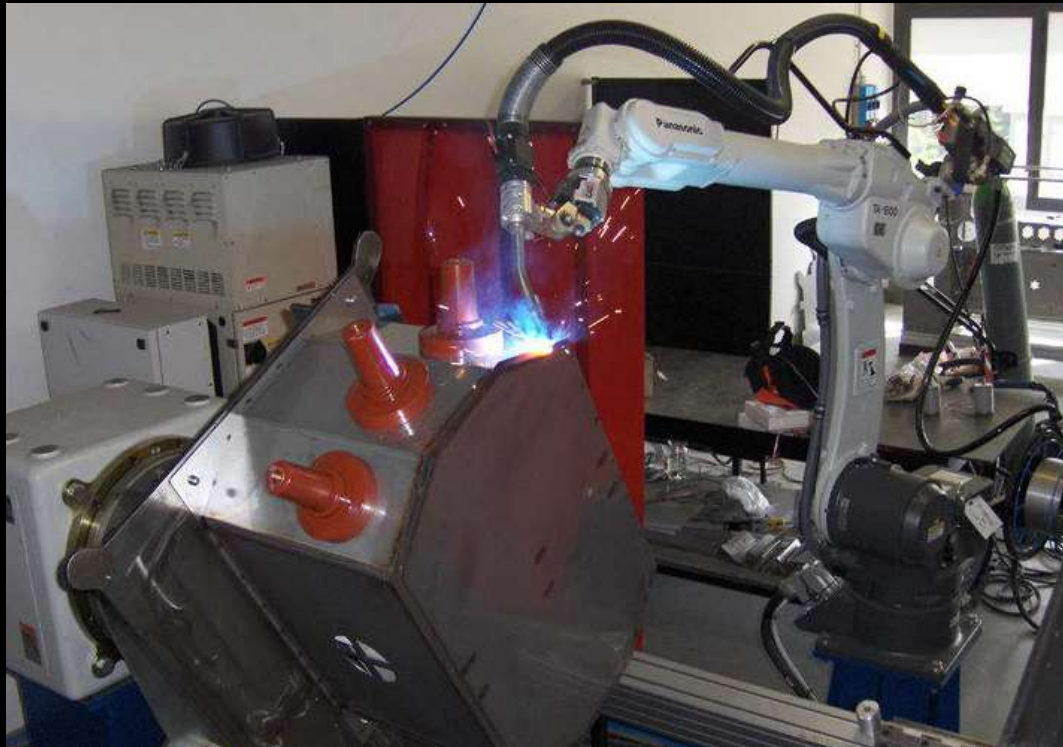


# PLS Pole mounted switch



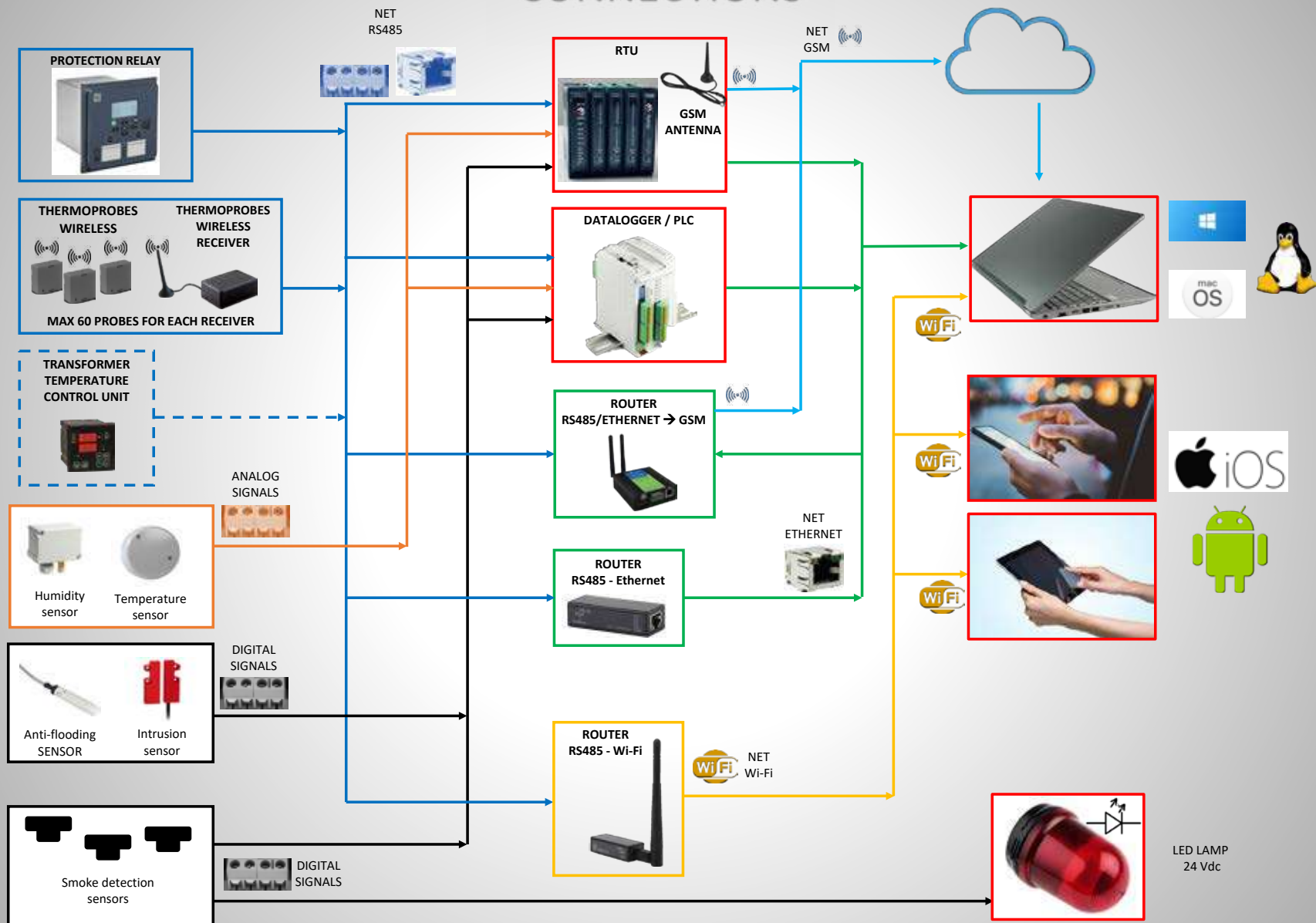
## PLS

MV overhead lines applications up to 40.5kV 630A 25kA.





## CONNECTIONS





# SEC Qualified Smart RMU /MRMU products

## 33kV-38kV Automated MRMU

SEC STANDARDS:  
- 32 SDMS 12



## 33kV Automated RMU

SEC STANDARDS:  
- 32 SDMS 11



## 13.8kV Automated RMU

SEC STANDARDS:  
- 32 SDMS 11



## 13.8kV Automated MRMU

SEC STANDARDS:  
- 32 SDMS 12





# **INNOVATIONS**

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## By His Own Technology

Since its inception, SEL has developed all its products through its own design.

SEL has never used licenses from other brands.

Design, research, testing, patents, certifications, and manufacturing production have always been carried out by

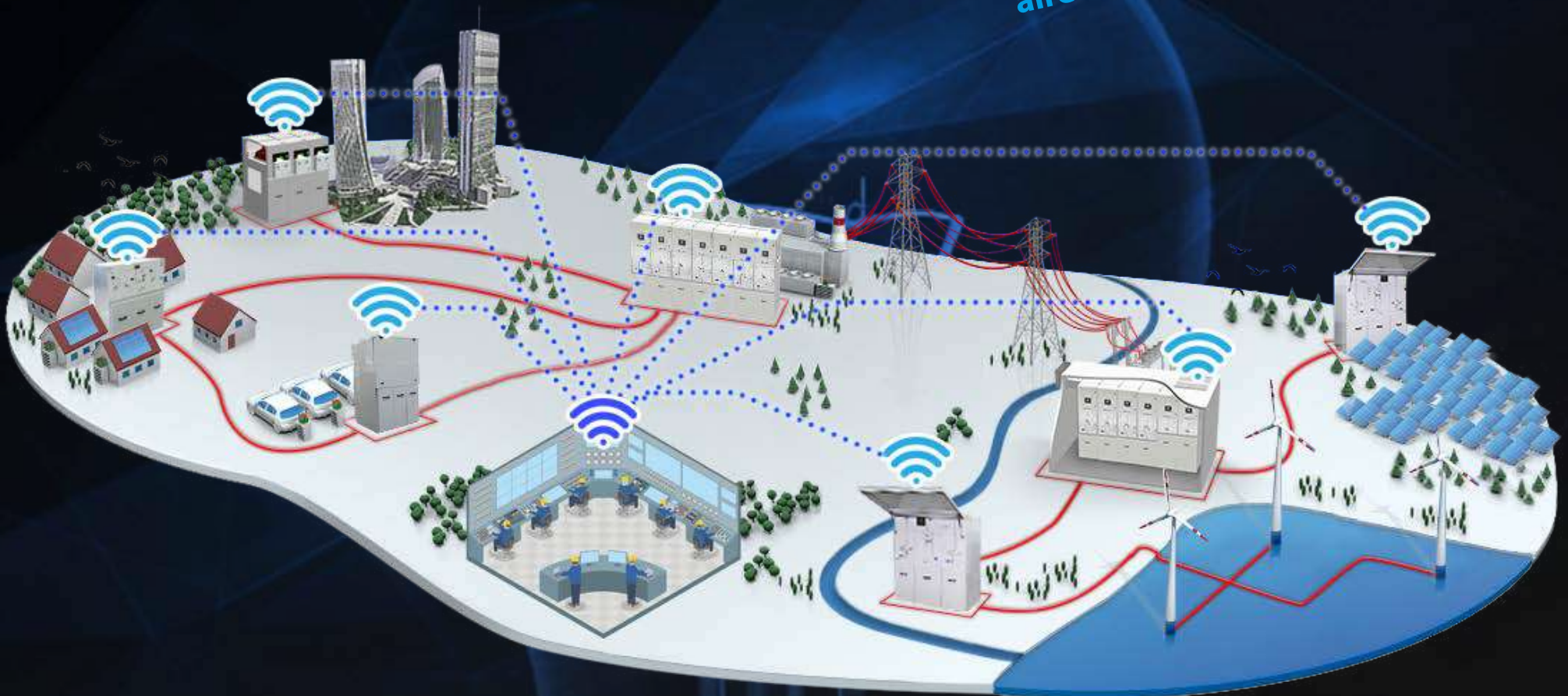


# The continuous development of the products certifies the key position of R&D in the Company

## The latest challenges are:

Proprietary solutions for monitoring and remote control of environmental conditions and full status of the switchgear and installation, including SCADA ready solutions.

*already available*





SF6 free switchgears

# TPR-ECO

Eco-Sustainable Vacuum Switching System

Clear AIR  
GWP=0



## Next Generation of MV Switchgears

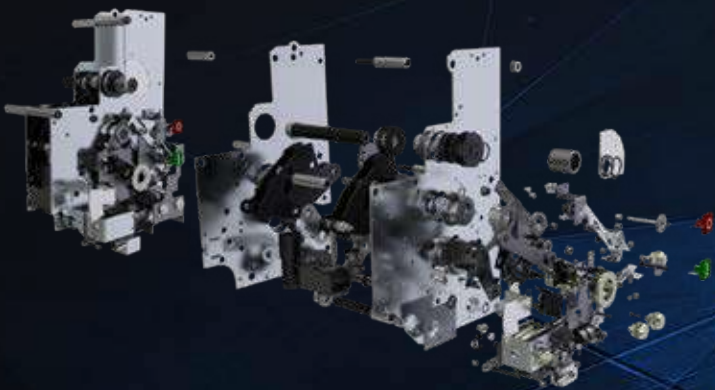
SEL has always developed innovative solutions and now it is introducing new Eco-Friendly switchgears.





### ELECTROMECHANICAL AND DYNAMIC SIMULATION

Our R&D team ensures maximum product reliability by the use of the latest techniques of mechanical and electromagnetic simulation and by research on new materials.



### PROJECT DEVELOPMENT

The team develops new projects using the best 2D and 3D design softwares on the market.



### CONSTANTLY EVOLVING

Our R&D department invests huge efforts for the continuous updating and integration of new technologies on our products to ensure greater performance and reliability. An important part is the study of the assembly of the various components to ensure a compact and powerful product.

### IMPLEMENTATION AND TEST

As last step for the birth of a new product, after the design process has ended, a prototype must be tested in the most accredited research and testing laboratories (like CESI).



TPR6 HP - Internal Arc Proof Test 36kV - 25kA (CESI)



### 05 PHASE



### ENVIRONMENTALLY FRIENDLY

SEL R&D Department conducts deep research on new materials to realize environmentally friendly products.

# QUALITY SYSTEM

SEL has always invested important human and economic resources to guarantee the quality of its products and it is precisely for this reason that its products are highly appreciated in the world: in fact, to compete at an international level, it is not enough to propose the lowest price, if we want to establish a competitive advantage that lasts over time we need to focus on the high technological content of our offer. And with this in mind, the company's quality system assumes a position of primary importance: it permeates every organizational level of the company: from management to the daily work of every single worker.

SEL is certified ISO9001: 2000 since 2003: the quality of its production system is therefore guaranteed by compliance with the dictates of this rule and was one of the first companies in Pistoia to acquire this certification.



SEL uses **UNI EN ISO 9001:2008**  
based quality control system in planning and production

# CERTIFICATION

According to the most important standards, our products have been type tested in the following laboratories:

- **CESI**: Italian experimental electro technical centre in Milan
- **National Electro technical Institute** "Galileo Ferraris" in Turin
- **SINAL** Laboratories
- **XIAN** Laboratory of China
- **CNAS** Shanghai Electric Power Transmission & Distribution Testing Center Co.,Ltd.
- **ICMET** Craiova - Romania





Via Amendola 51035  
Lamporecchio (PT) ITALY  
Tel. +39 0573.800.51  
Fax +39 0573.803.110  
Web site: [www.sel-electric.com](http://www.sel-electric.com)  
E-mail: [info@sel-electric.com](mailto:info@sel-electric.com)

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[www.sel-electric.com](http://www.sel-electric.com)