

# POWER ELECTRONICS

CURRENT SENSORS, VOLTAGE SENSORS  
& VOLTAGE DETECTORS

# EXPERT IN CUSTOMIZED ET STANDARD SENSORS FOR HARSH ENVIRONMENTS

Get the most out of our 50 years of experience in current and voltage measurements worldwide. Engineered in partnership with the most recognized industrial leaders, our sensors can handle extremes applications and harsh environments like railways, mining, offshore wind turbines, compact drive solutions and many more : your application is unique, so are our sensors.

## 1. PERFORMANCE

To allow precise energy metering, PETERCEM SENSORS reaches accuracy error lower than 0,25% (for HRS Range) and lower than 1% for other ranges. This accuracy is over frequencies up to 100 kHz, allowing your installation to run in a reliable and efficient way.

Get high dynamic performances with representative outputs correctly followed up to 100 A/us and 50 V/us.

## 2. CUSTOMIZATION

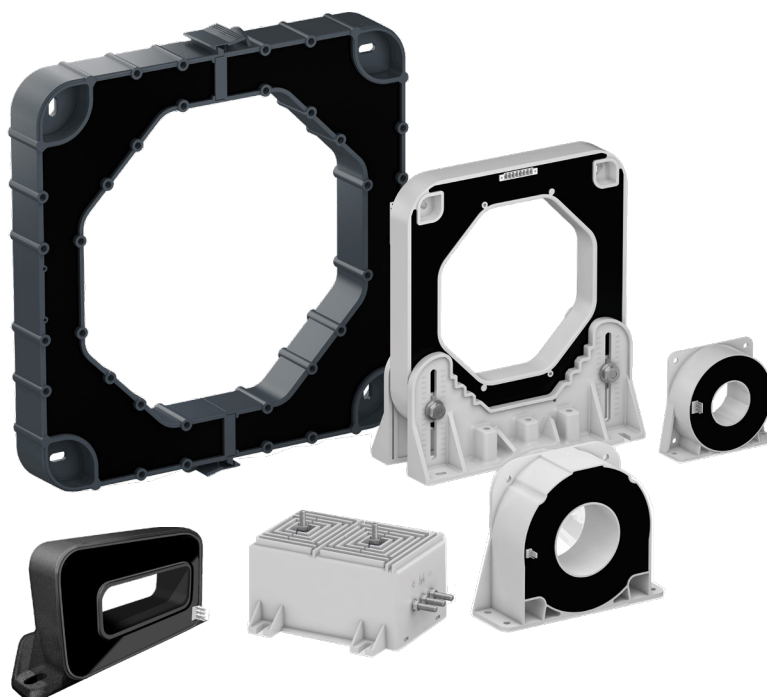
Thanks to their specific designs, which prevent electric and magnetic perturbations, our sensors can be implemented in many different applications, such as compact systems or next to high current or voltage bus bars.

Geopolitical shift during the last few years pushed PETERCEM SENSORS teams to re-inforce their efforts to build robust and reliable products and organize a resilient supply chain using the best practice in the industry recognized by our certifications IRIS/EN9100.

## 3. RELIABILITY

Our thousands of sensors installed in harsh environments worldwide since more than 50 years demonstrate our extreme quality in designing, manufacturing and testing.

Efficiency and cost control are major concerns in our industries: to support this trend, PETERCEM SENSORS teams build specific solutions to facilitate integration, give better technical capabilities and enable our customers to offer effective applications on their markets.



# NEW RANGE OF PRODUCTS

# VENUS the new generation of voltage sensors

## MODULAR

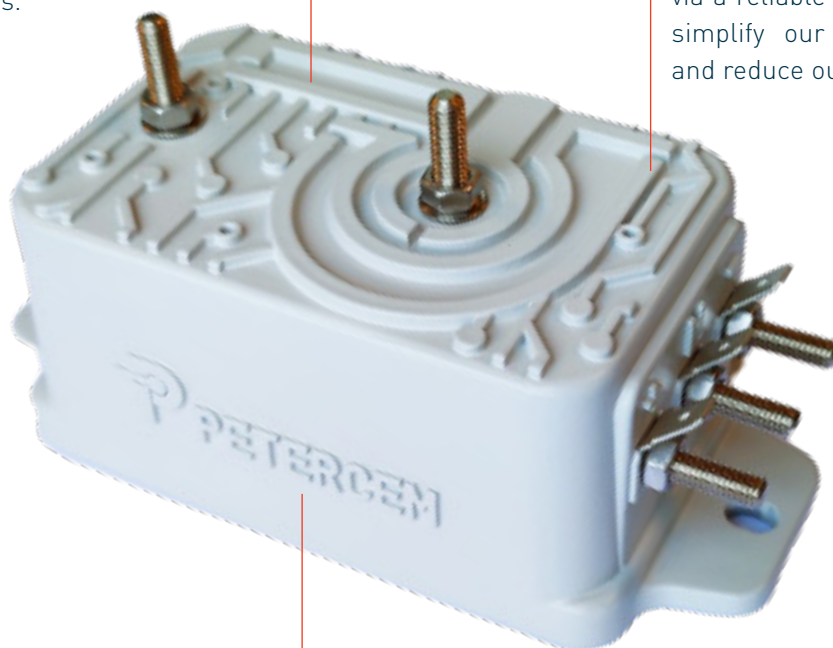
In alignment with our company's 'customization' DNA, the VenuS range is based on a unique ambitious platform.

Our aim is to anticipate as well as possible any customers requests in order to create smart tailored assemblies that will meet end-users' needs.

## SUSTAINABLE

To be able to offer the most suitable product in terms of value for money, the VenuS solution integrates a forward-looking resilient supply chain.

By using standard modern components via a reliable network of suppliers, we simplify our manufacturing process and reduce our carbon footprint.

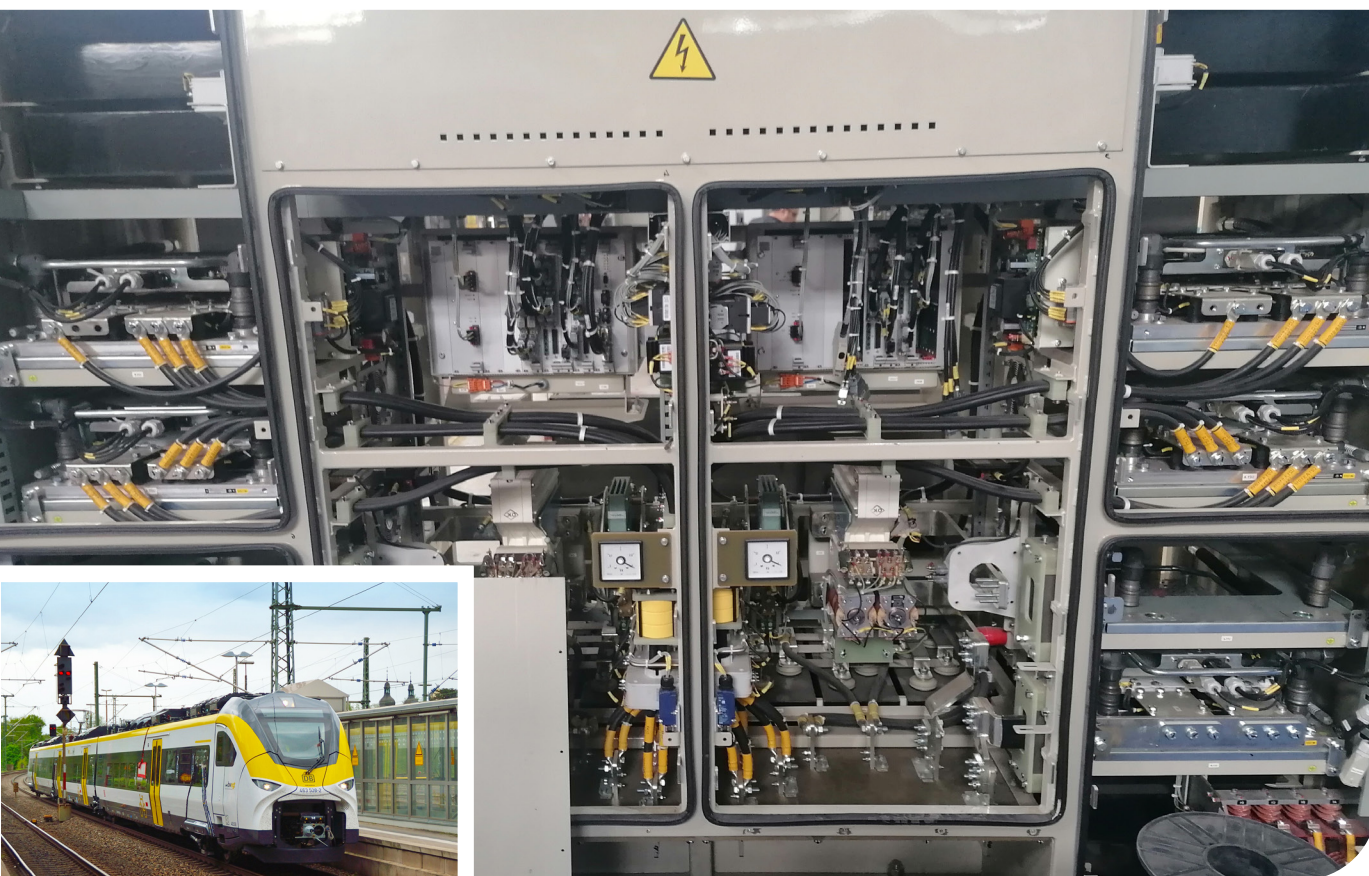


## INNOVATIVE

With the aim of reinventing our whole range of voltage sensors, VenuS models include recent digital technologies and an innovative internal design.

This allows us to present this high lifetime and robust range: based on some efficiency-focused technical specifications, VenuS products are certified for most harsh environments.

# RAILWAY



## RAILWAY

### ROLLING STOCK

Trams, metros, regional and long distance trains use auxiliary converters and electric traction systems requesting a high reliability. **PETERCEM SENSORS** measures current and voltage to ensure safe and reliable operations for railway systems.

### SUBSTATIONS

Substations provide energy and will also store it in the future. Feeding the grid precisely is only possible with reliable measurements.

## INDUSTRIAL VEHICLES

Trend such as Mobility, Autonomous driving, Digitalization and Electrification (MADE) are causing fundamental shifts in both technology and business models for leading company in the industrial vehicle sector.

For electrification vehicles or infrastructure makers, our customers can build effective systems, based on **PETERCEM SENSORS** platform.

# RAILWAY PRODUCTS

## CURRENT SENSORS

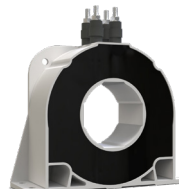


Closed loop

**CS series**

**300 A TO 2000 A**

ACCURACY 0.5%



Closed loop

**HRS-T series**

**1000 A TO 2500 A**

ACCURACY 0.25%



Fully electronic

**NCS-T series**

**4000 A TO 20000 A**

ACCURACY 1%

## VOLTAGE SENSORS

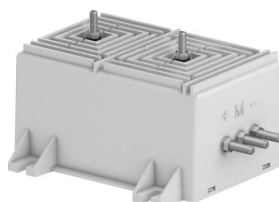
Electronic technology



**VS series**

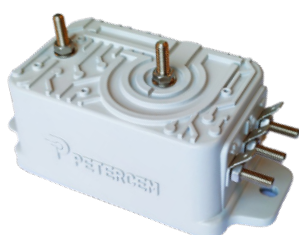
**50 V TO 1500 V**

SIZE 0



**2000 V TO 4200 V**

SIZE 1



**VenuS series**

**50 V TO 2000 V**

SIZE 0



## VOLTAGE DETECTION

Electronic technology

Personal warning from dangerous voltage.  
Very good visibility thanks to red colored LEDs.  
Complies with main railway standards.



**VD 1500-48**

**1500 VDC**

SIZE 0



**VD 3000-25**

**3000 VDC**

SIZE 1

# INDUSTRY



## ENERGY

### ENERGY STORAGE SYSTEM

Storing energy will be an important part of future power grids. **PETERCEM SENSORS** precise current and voltage measurements help monitoring the system.

### WIND TURBINES

On and offshore wind turbines generate high power. To feed grids precisely, our sensors measure currents and voltages from wind turbines up to 15 MW.

### SOLAR

**PETERCEM SENSORS** measures DC currents from solar farms with high precision and provide reliable monitoring.

## INDUSTRY

### DRIVES

Electric drives are widely used in everyday life. Precise motion control and energy efficiency are crucial, current sensors play a role in achieving these goals.

### UPS

UPS systems need to monitor charging, discharging, and output currents, which requires monitoring with current and voltage sensors.

### WELDING

The quality of industrial welding relies heavily on the supply current. Sensors measure and ensure high reliability in industrial processes.

# INDUSTRY PRODUCTS

## CURRENT SENSORS



Closed loop

ES series

100 A TO 2000 A

ACCURACY 0.5%

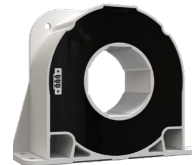


Closed loop

HRS-I series

1000 A TO 2500 A

ACCURACY 0.25%



Fully electronic

NCS-I series

4000 A TO 40000 A

ACCURACY 1%



Open loop

RFCS series

1000 A TO 1500 A

ACCURACY 1%



## VOLTAGE SENSORS

Electronic technology



50 V TO 1500 V

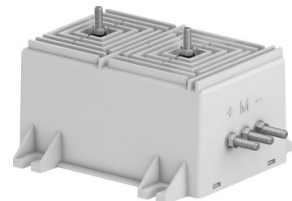
SIZE 0



VS series

2000 V TO 4200 V

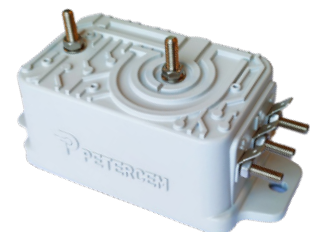
SIZE 1



VenuS series

50 V TO 2000 V

SIZE 0



## VOLTAGE DETECTION

Electronic technology

Personal warning from dangerous voltage.  
Very good visibility thanks to red colored LEDs.



VD 1500-48

1500 VDC

SIZE 0

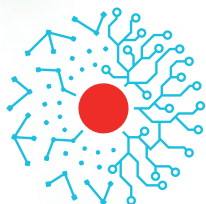


VD 3000-25

3000 VDC

SIZE 1





# MAFELEC TEAM

CREATING SMART AND  
SUSTAINABLE INTERFACES



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## MEMBERS OF THE MAFELEC TEAM

