

# SENSORS

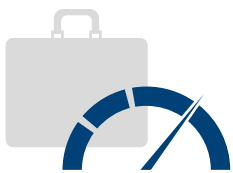


CREATING SOLUTIONS FOR INDUSTRY, ENERGY & RAILWAY

# Current and voltage measurement expertise from PETERCEM

## Competence that you can rely on

Profit from our global network and 40 years of experience in current and voltage measurements. As an expert in electrical engineering, we offer sensors that can handle rough applications like rail, mining, offshore windmills, compact drive solutions and many more.



### Speed up your projects

Don't spend your time searching for another partner, select current and voltage sensors to measure DC, AC and pulsating current.

Add other low voltage products to your order and get all the components you need from PETERCEM.



### Reliable in extreme conditions

Years of product development and improvements allow us to offer you a product operating from  $-40\text{ }^{\circ}\text{C}$  up to  $+85\text{ }^{\circ}\text{C}$ .

Thanks to their specific designs, which prevents electric and magnetic perturbations, our sensors can be implemented into compact systems or next to high current or voltage bus bars.



### Continuous operation

For precise energy metering Petercem sensors guarantee very low accuracy error under 0.5% 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  $100\text{ A}/\mu\text{s}$  and  $50\text{ V}/\mu\text{s}$ .

## Industry



### Drives

Electric drives can be found everywhere in today's life: from elevators to the conveyors at the airport. Very precise motion control and energy efficiency are necessary – current sensors are part of this regulation.

### UPS

UPS need to follow charges, discharges, as well as output currents. Batteries' lifetime and efficiency are very dependent from the regulation system and need to be monitored with current and voltage sensors.

### Welding

The quality of industrial welding depends directly on the supply current. PETERCEM sensors measure these currents and guarantee the highest reliability to your processes.

## Energy



### Energy storage system

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

### Windmills

On and offshore windmills generate high power. To feed grids precisely, measure currents and voltages from wind turbines with up to 8 MW.

### Solar

PETERCEM sensors measure DC currents from solar farms with high precision and provide reliable monitoring.

## Railway



### Rolling stock

Trams, metros, regional and long distance trains – they all use auxiliary converters and electric traction systems requesting a high reliability. PETERCEM sensors measure 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.

## Sensor panorama

Measure DC, AC or pulsating currents and voltages with a galvanic insulation

### Current measurement - Hall effect technology

Closed loop

MP25



EL100



CS300



ES



5 A

2 000 A

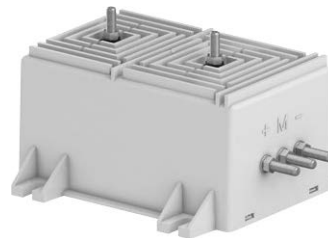
### Voltage measurement

Full electronic technology

VS50



VS4200



50 V

4 200 V

### Railway applications

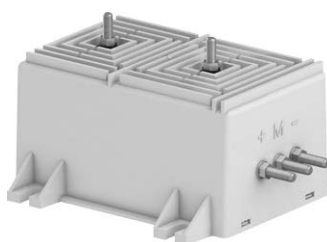
Dedicated products meeting main railway standards.  
Current measurement from 100 A to 40 000 A.  
Voltage measurement from 50 V to 4 200 V.



CS2000



VS4200



VD1500



## Open loop

HBO



100 A

1 000 A

## Full electronic

NCS125



4 000 A

NCS305



40 000 A

## Voltage detection

### Full electronic technology

Maintenance personnel warning from dangerous voltages.  
Very good visibility thanks to red colored LEDs.  
Complies with main railway standards.

VD1500

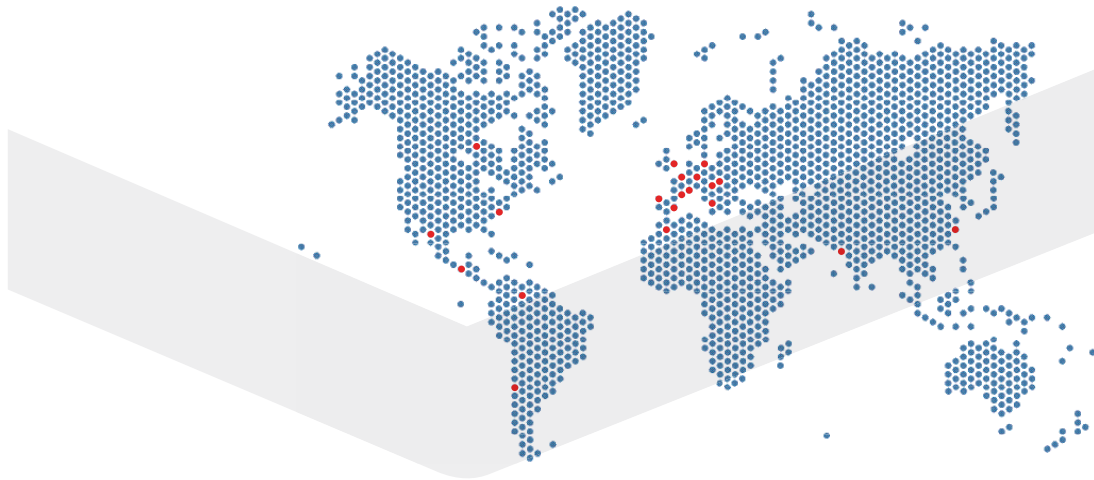


25 V

VD3000



3 600 V



## EXPERT IN GLOBAL SOLUTIONS



### MAFELEC

Creating control and signalling solutions for harsh environments

471 Route de la Cuisinière  
38 490 Chimilin - France  
Ph.: +33 (0)4 76 32 07 33 / Fax: +33 (0)4 76 32 54 11  
[www.mafelec.com](http://www.mafelec.com)



### PETERCEM

Creating switching solutions for harsh environments

14 ZA les quatre Vies  
38 290 Frontonas - France  
Ph.: +33 (0)4 74 94 64 60 / Fax: +33 (0)4 74 94 64 89  
[www.petercem.com](http://www.petercem.com)



### STOPCIRCUIT

Creating electrical protection and sub assemblies solutions for harsh environments

121 boulevard de la Résistance  
71 020 Mâcon cedex 9 - France  
Ph.: +33 (0)3 85 20 94 20  
[www.stopcircuit.fr](http://www.stopcircuit.fr)



## MAFELEC GROUP



### FULL ELECTRONIC SYSTEM

[www.fesys.fr](http://www.fesys.fr)



### COMTRONIC

[www.comtronic-schoenau.de](http://www.comtronic-schoenau.de)