Current sensors, voltage sensors and voltage detectors
Current and voltage measurement expertise from ABB
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.

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 ABB.

Years of product development and improvements allow us to offer you a product operating from -40 °C up to +85 °C.

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

For precise energy metering ABB 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 A/µs and 50 V/µs.

Speed up your projects

Reliable in extreme conditions

Continuous operation
Industry

Rolling stock
Trams, metros, regional and long distance trains – they all use auxiliary converters and electric traction systems requesting a high reliability. ABB 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.

Energy

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. ABB sensors measure these currents and guarantee the highest reliability to your processes.

Energy storage system
Storing energy will be an important part of future power grids. ABB’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
ABB sensors measure DC currents from solar farms with high precision and provide reliable monitoring.

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

Current measurement - Hall effect technology
Closed loop

Voltage measurement
Full electronic technology

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.
Open loop

- HBO
  - 100 A

Full electronic

- NCS125
  - 1 000 A
- NCS305
  - 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

Downloads

For additional information refer to our catalog.
Submit your request with the dedicated questionnaire. Our expert will define the right sensor for your application.
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