



# CAT ENERGY

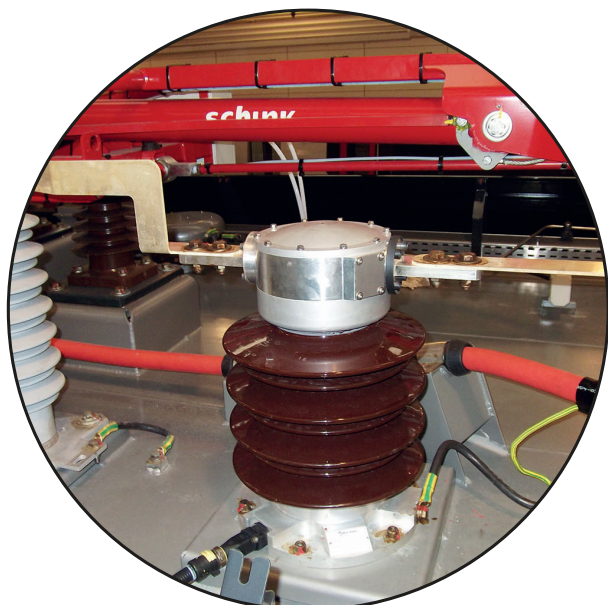
Energy & traction control and protection

Accurate, modular, and scalable solution for energy measurement and traction control.

CATenergy is a proven, reliable, accurate, and cost-effective solution used to measure current and voltage for traction control management across existing or new build rolling stock.

Features include:

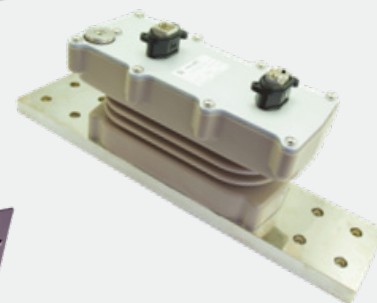
- Highly accurate energy calculation
- Complete set of outputs for traction control
- Energy and maintenance data collection
- Data communication, processing, and monitoring



AC Sensor



Control Unit



DC Sensor

### REDUCE WEIGHT AND SPACE

The CATenergy solution reduces weight and installation space, replacing two transformers or sensors compared to traditional solutions. Its compact footprint results from not having to multiply the insulation distance between equipment to prevent electrical arc.

#### CLASSIC SOLUTION

200 kg

Explosion risk

Potential and current transformers needed

Not compliant with energy measurement system

#### CATENERGY SOLUTION

Less than 50 kg

No explosion risk

Potential and current transformer function in one sensor

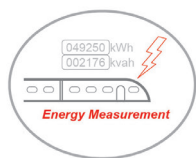
Compliant with energy measurement system

**CUSTOMER BENEFITS**

- All-in-one, cost-effective solution
- Reduced weight and space for easy integration
- Improved reliability
- Simplified roof architecture
- Easy integration on retrofit and new-built trains
- Increased accuracy
- Modular design

**ACCURACY**

*Energy Measurement*



**SPECIFICATIONS**

**Energy Measurement**

Compliant with TSI Loc and Pas, EN 50463, and IEC 62888

Voltage, current, and energy calculations

**AC sensor:**

Accuracy << 1.5 % for AC energy

AC: 25 kV, 15 kV, 12 kV / 16.7 Hz, 25 Hz, 50 Hz, 60 Hz. 50 A to 800 A

**Weight:** 35 kg

**Dimensions:** 450 x 300 mm

**DC sensor:**

Accuracy << 2 % for DC energy

DC: 3 kV, 1.5 kV, 750 V, 600 V, 750 A to 5000 A

**Weight:** from 8 to 12.5 kg

**Dimensions:** 450 x 150 x 100 mm

Digital output

**Temperature:** -40 °C...+70 °C

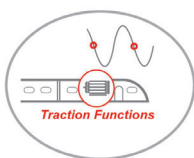
Severe condition insulation test

Aging test

**Installation:** internal or external

**INTEGRATION**

*Traction Functions*



**Traction Functions**

Compliant with TSI Loc and Pas, EN 50463 & IEC 62888

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**MANAGEMENT**

*Communication*



**Communication**

Data collecting service solution

Secured data server

Database storage

Application service provider

Web access to data base (energy, voltage, current, diagnostic, localization, maintenance, etc.)

Graphic data presentation tools

Train and energy mapping

History and temporal analysis

Status detection and temporal analysis

Files export for processing a report

Geo-localization and route display

Condition-based maintenance

Custom application

**CONTACT**

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