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

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

INTEGRATION
Traction Functions

MANAGEMENT
Communication

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

Traction Functions
Compliant with TSI Loc and Pas, EN 50463 & 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
DC sensor:
Accuracy ≪ 2 % for DC energy
DC: 3 kV, 1.5 kV, 750 V, 600 V, 750 A to 5000 A
Digital output
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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

Wabtec Corporation
Darwinstraat 10,
6718 XR Ede, Netherlands
Phone: +31 (0)88 600 4500
Email: wnl_salessupport@wabtec.com

WABTECCORP.COM