



Prioritizing  
safety in  
protection  
& control



## MicroMeter

Energy Mapping Solution

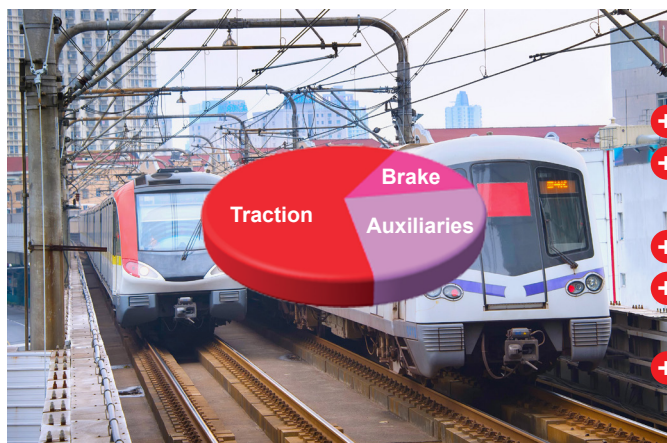


The most miniaturized energy measuring solution to create a comprehensive detailed energy consumption

High accurate system for consumption mapping & control.

MicroMeter is the perfect solution to measure energy consumption of multiple subsystem on board.

- Ultra-compact multi-channel energy meter
- Single-phase, Multi-phase, AC, DC
- Include auxiliary power supply for all off the 4th sensors channel
- Compliant with major communication network
- Easy to install



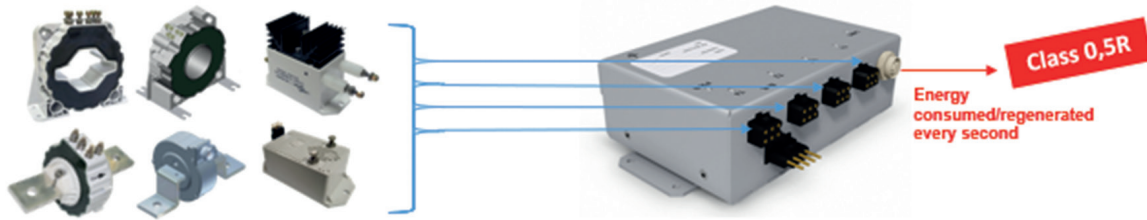
### Customer benefits:

- + Global overview of the energy consumption
- + Essential data for energy management & efficiency
- + Energy data creation for all consumer
- + Added value information for condition based maintenance
- + Railways standards compliance



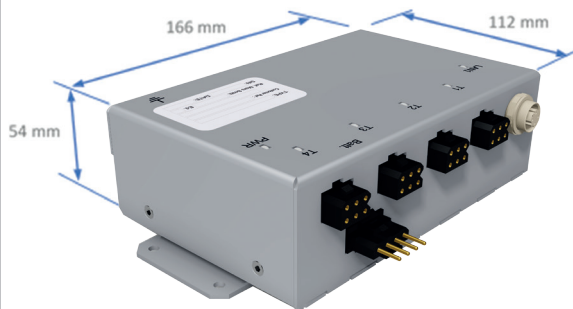
## Complete solution portfolio

### For easy integration on rolling stock

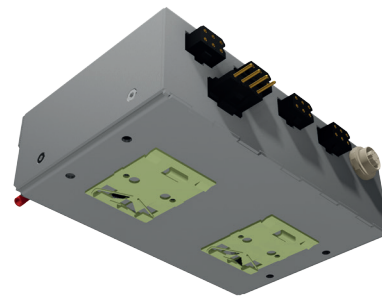


### Specifications

- Hall effect sensors complete range
- AC & DC measurement
- MSV voltage sensor, 950 - 5000 VAC/DC
- MSA current sensor, 100 - 2000 AAC/DC
- Closed loop system for high accuracy
- Overall accuracy MSA  $\pm 0.5\%$ , MSV  $\pm 1\%$
- Linearity  $< 0.1\%$
- Operating temperature  $-50\text{ }^{\circ}\text{C}$  to  $+85\text{ }^{\circ}\text{C}$
- Auxiliary supply  $\pm 15\text{ VDC}$  to  $\pm 24\text{ VDC}$
- 4 inputs energy meter
- Up to 3 calculation channels
- Compliant with 3-phase
- Class 0.5R energy calculation every second
- Energy consumed/regenerated, Active/Reactive
- Digital output
  - Ethernet 10/100M
  - RS485
  - MVB
- Including  $\pm 15\text{ VDC}$  power supply on each channel
- Full range 24-110 VDC general power supply



Panel fixation



35 mm rail fixation

To discover everything EMS can do, contact

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