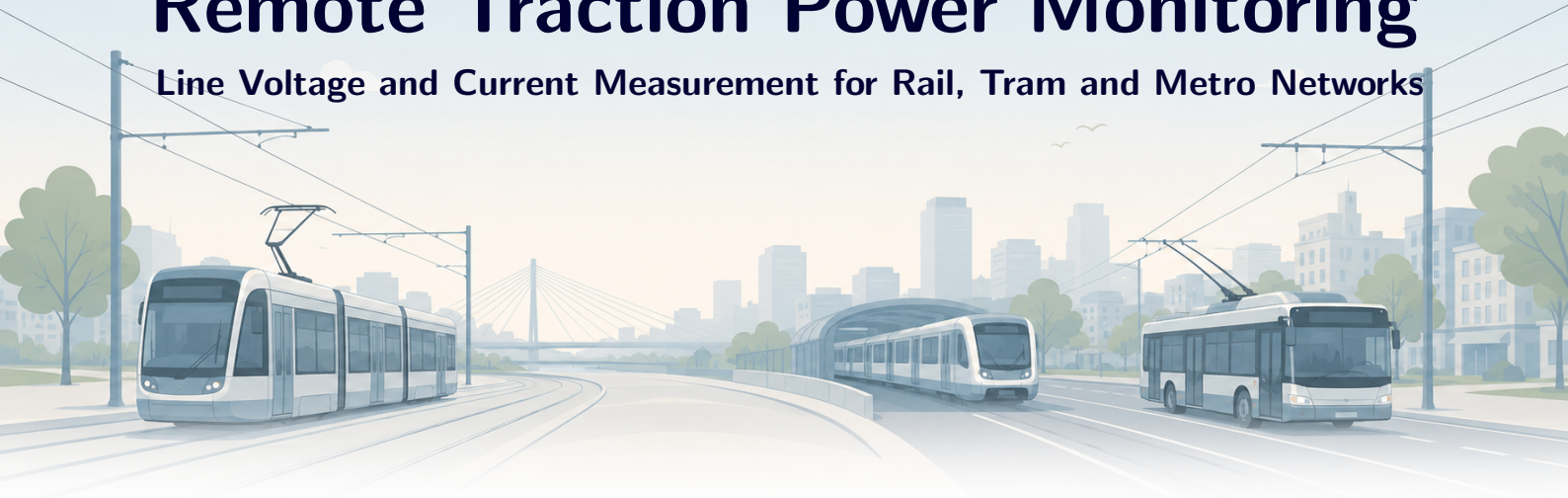


Remote Traction Power Monitoring

Line Voltage and Current Measurement for Rail, Tram and Metro Networks



Insight into traction power

The Strukton Remote Monitoring System continuously measures traction line voltage and current. It provides the data needed to understand network loading, detect weak points and areas with low voltage, identify abnormal conditions and support maintenance of railway, tram and metro power-supply systems.

The system can be installed alongside the traction line or inside a traction substation. A substation installation can monitor multiple outgoing feeders from one central system, creating a clear overview of voltage and current throughout the supplied section. This helps identify voltage drops and network sections where the traction power supply may require improvement.

Key benefits

- **Continuous visibility:**
Remote insight into traction voltage and current
- **Flexible installation:**
Suitable for trackside locations and traction substations
- **Line powered:**
Can operate directly from the traction line without a separate local power supply
- **Safe integration:**
Electrically isolated measurement and communication interfaces
- **Multi-feeder monitoring:**
One system can monitor multiple feeders

One platform, two installation concepts

Trackside monitoring

Installed at the traction line where measurement is required. The unit measures line voltage and line current and can be powered from the line itself. Isolation between the high-voltage measurement side and the monitoring interface supports a safe, robust installation.

Substation monitoring

Installed inside an existing traction substation. The modular configuration can acquire voltage and current measurements from multiple outgoing feeders and make the information remotely available from one central monitoring point.



System characteristics

Function	Description
Measurement	
Traction voltage (nominal)	600/750/1500 V
Line current	0-2500 A
Return touch voltage	0-250 V
Installation	
Trackside configuration	Installed in a trackside cabinet or on a gantry/pole
Substation configuration	Installed in or on a rectifier cabinet, or wall-mounted
Scalability	Supports measurements on 3 outgoing feeders (3x voltage and 3x current) within one system. Expandable to 6x voltage/current.
Power and Isolation	
Power supply	Line-powered operation possible; power arrangement tailored to the installation
Electrical isolation	Isolated measurement and communication interfaces separate the traction circuit from the monitoring environment
Installation safety	Designed for safe integration into high-voltage traction power installations
Data and Integration	
Remote access	Measurement data available remotely for operational and maintenance use
System integration	Interface to customer monitoring or control systems can be adapted to project requirements

From Measurement to usefull insight

Reliable voltage and current data helps operators assess traction-network loading, investigate disturbances and plan maintenance based on actual system behaviour. The Remote Monitoring System brings these measurements together in a safe, scalable solution that can be tailored to both new and existing traction power installations.

