



**PRECISION AND RELIABILITY  
AT EVERY TURN**

**ELECTRONICS FOR RAILWAY  
& PUBLIC TRANSPORT**

# ADVANCED ELECTRONICS FOR SAFER, SMARTER RAILWAYS

Prima Electro is a leading provider of high-performance **electronic solutions for the railway and public transport industry.**

With a strong commitment to innovation, reliability, and safety, we design and manufacture **tailor-made** electronics that meet the most demanding industry standards, at every turn.

## PRIMA ELECTRO DELIVERS

- **Certified excellence**  
Certified to **SIL2, SIL3, and SIL4**, ensuring reliability in extreme conditions.
- **End-to-End approach**  
Integrated, efficient production for better quality, lower costs, and increased competitiveness.
- **Long-term support**  
Not only a service, strategic rail **partnership** ensures lasting success and innovation.

## INFRASTRUCTURES

### POWER ELECTRONICS AND LASERS FOR SUSTAINABLE TRANSPORTS

Cutting-edge electronic and laser solutions for the **reliability** and **performance** of modern railway infrastructure.

#### REDI – ELECTRONIC TRACK RELAY

Used in **Signalling Systems**, in particular to signal occupied/unoccupied track circuits. It detects the failure of any insulated joint, working with different track circuit types (single rail track circuit, double rail track circuit, 50 Hz, 83.3 Hz PSK).

- **SIL4** certified
- RFI IS402 compliant

#### DC BATTERY CHARGER (2x3.6kW module)

Low power **DC battery charger** developed specifically for **public charging hubs** and parking areas. This compact IP67 solution is suitable for under-street installations.

- **SiC** Technology
- Bidirectional architecture (**V2G** ready)
- 400 VDC Max Output Voltage (CCS2 compatible)
- 450 ÷ 550 VDC Input Voltage
- **98% efficiency at full load**

## ON BOARD

### SOLUTIONS PROVEN RELIABLE IN THE MOST DEMANDING SECTOR.

**Safe transport solutions:** from data systems to on-board controls and transit monitoring.

#### CONTROL UNITS & ACCELEROMETER

##### Bogie Stability C.U. and C.U. for Hot Box Detection

Designed to maximize bogie stability and safety during train operation, enhancing hot box detection and resilience to extreme environments.

- **SIL2 and SIL3** certifications for high safety integrity
- Ambient operating temperature: **-25° to +40°C** (EN50155 TI Class)
- Powered by train batteries with **16.7–36 VDC** continuous supply voltage
- Compact design with **IP30** protection

##### Accelerometer

Designed to simultaneously measure acceleration, velocity, and displacement, ideal for harsh environments.

- **SIL2** certification
- Wide operating temperature range: **-30° to +70°C**
- **IP67** protection for water and dust resistance

#### HIGH VOLTAGE POWER SUPPLY (PSU)

Compact and robust **DC/DC power supply** suitable for railway and submarine applications.

- **SiC** Technology
- Input Voltage: **1500 VDC** Nominal
- Output Voltage: **300 VDC** Nominal
- Max Output Current: **50A**
- Max Continuous Output Power: **15kW**
- No auxiliary supply required

#### OPTICAL POWER SUPPLY

**Transmitter unit** powered by a **laser diode** with a receiver that converts the laser beam into electrical energy. Designed to supply power meters installed on trains.

- **12 VDC** Input voltage
- **500mW @5 VDC** Output power
- Operating temperature: **-40° / +85°C**





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