

# APT-WDM - WHEEL DIAMETER MEASUREMENT

## DESCRIPTION

The APT-WDM (Wheel Diameter Measurement) is specifically developed for the measurement of the wheel diameter on heavy rail and light rail vehicles (such as tram and metro).

Using state of the art laser technology, the APT-WDM system provides a reliable, fast and affordable technology for the measurement of the wheel diameter.

## TECHNOLOGY

### Control Box

An industrial enclosure or street cabinet contains the data acquisition module and an industrial computing unit. The box is installed in the vicinity of the track up to a distance of 150 m.



The control box is of a water and wind proof construction.

All cabling runs directly from the sensors to this box.

The control box is hooked up to the power grid and connected to the internet (data).

Optionally, a wireless data connection can be configured.

### Vehicle identification

Vehicle identification is based on readings from existing vehicle identification loops or RFID tags.



The measurements are linked with the vehicle identification so that they are assigned to a specific wheel.

Optionally a camera can be installed. The camera only provides images when a vehicle is present.

### Contact

#### APT

[www.aptrail.com](http://www.aptrail.com)

Troonstraat 98  
B – 1050 Brussels  
Belgium

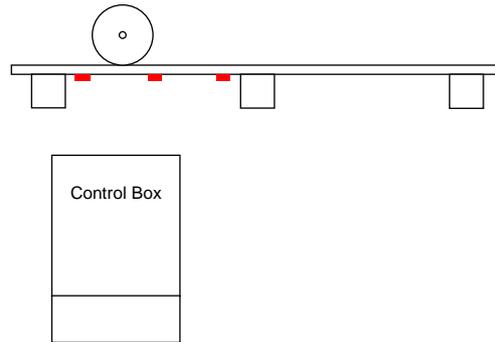
E-mail [info@aptrail.com](mailto:info@aptrail.com)

T. +32-(0)16-23 20 40  
F. +32-(0)16-23 89 10

### Data acquisition

---

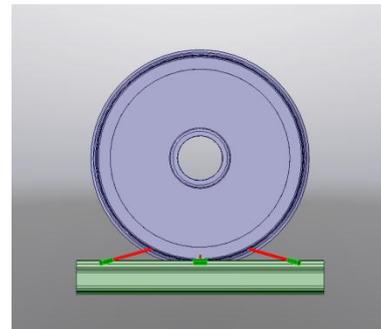
The system uses six sensitive laser distance sensors: three for each wheel.



### Sensor Installation

---

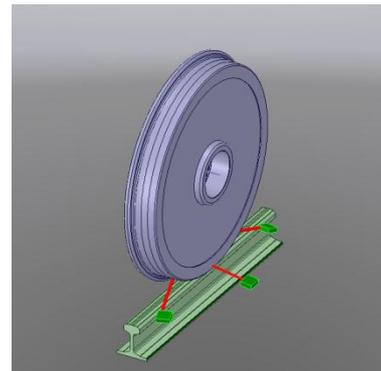
The sensors are attached to the rail using a special framework.



### Data Processing

---

Data processing is done immediately for each wheel. Wheel diameters are measured. In case of significantly reduced wheel diameters or differences between left and right wheels, immediate alarms are generated.



## SOFTWARE

The standard software allows the viewing of the measurement date and time, the vehicle identity and speed and the wheel identity and diameter.

The data are accessible with a browser through a standard internet connection (password-protected website).

Email or text message alerts can be configured and sent automatically to the maintenance crew/responsible.

The information can be transmitted to a remote location for integration into a maintenance vehicle database.

An automated back-up is stored on the APT servers.