



Wheel Detection

Wheel Detection System RSR310 - WSC004

The combination of the Wheel Sensor RSR310 with the Wheel Sensor Signal Converter WSC004 forms a reliable Wheel Detection System for a variety of basic integrity applications. It can be utilised to trigger automated equipment and processes such as hot box detection systems, AEI readers or vision monitoring systems. The solution offers flexible integration and enhancing operational efficiency for industrial facilities and non-public environments.



Information

- Status of sensor systems
- Wheel position
- Travel direction
- Center pulse
- Gate pulse
- Error output
- Diagnostics



Applications

- Wayside Train Monitoring System (WTMS) for treadle and switching tasks such as:
- Hot box detection system
- Flat wheel detection system
- AEI card reader
- Lubrication system
- Vision monitoring system
- Warning system



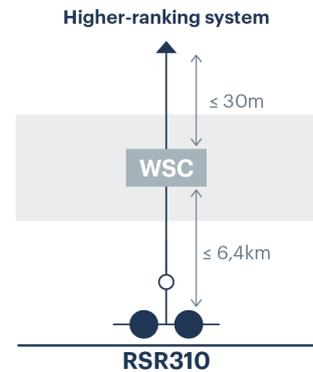
Benefits

- Highly resistant to electromagnetic interferences
- High availability
- Convenient plug-in connection and rail claw
- Open interface via optocoupler
- Low maintenance
- Quick and easy installation
- Operation in harsh and tight environments

RSR310 - WSC004

The WSC004 processes the signal received from the wheel sensor and provides outputs triggered by the passage of a rail vehicle's wheel. These digital signals are transmitted via optocoupler outputs to a higher-ranking system for further processing.

- DIN rail mounting in wayside cabinet with a small footprint
- Robust design for reliable operation under extreme conditions and temperatures
- Optocoupler outputs for reliable signal transmission
- Simple configuration via DIP-switches
- Interface for local and remote diagnostics
- Buttons for calibration and traversing simulation
- Max. Loop resistance $\leq 150 \Omega$ (up to 6,4 km at 1,4 mm²)



Technical Data



	RSR310	WSC004
Interfaces	Non-vital enhanced analogue signal	Optocoupler RS232 & ASD for diagnostic information
Safety level	Basic Integrity (Non Vital)	Basic Integrity (Non Vital)
Temperature	-40 °C to +85 °C (tested to -55 °C)	-40 °C to +85 °C (tested to -55 °C)
Humidity	Up to 100%	Up to 100% (without condensation or ice formation for the entire temperature range)
Electromagnetic compatibility	EN 50121-4; AREMA 11.5.2	EN 50121-4; AREMA 11.5.2
Mechanical stress	EN 50125-3 "On rail", AREMA 11.5.1, Class A	EN 50125-3 "Outside the track", AREMA 11.5.1, Class C
Protection class	IP66 / IP68 to 8 kPa/60 min.	IP20
UV resistance	Yes	-
Wheel detection	Wheel sets according to ERA/ERTMS/033281 and more	-
Dimensions	H: 50 mm W: 268 mm D: 69 mm	H: 118,9 mm W: 22,6 mm D: 114 mm
		Optocoupler
Signal limits	-	Max. C-E voltage: 72 V DC Max. switching current: 100 mA Insulation voltage: 3000 V
Power supply	-	Voltage: +10 V DC to +36 V DC Insulation voltage: 2000 V