



SIEMENS



Clearguard ZP D 43

Electronic Wheel Detection Equipment

Rail Automation

Reliable and Cost-effective Track Vacancy Detection

The Clearguard ZP D 43 electronic wheel detection equipment is a wheel detection component for use in track vacancy detection systems using axle counting methodology.

It is preferentially used as the outdoor equipment with the Clearguard ACM 200 counting system. The ZP D 43 unit combines a double wheel detector and a trackside connection box.



DEK 43 Double Wheel Detector

The DEK 43 double wheel detector is made up of a transmitter and a receiver in separate housings, each mounted with a reducing plate against the rail web.

Trackside Connection Box

The trackside connection box of the Clearguard ZP D 43 consists of a base plate and a cover which is made of either plastic or aluminum. The base plate is comprised of an application-specific printed circuit board and a protective cover.

Benefits

- Long service life
- Low fault liability
- High mechanical stability
- Low-cost associated with stocking spare parts
- Flexible application options in a broad speed range
- Unaffected by metal objects such as steel-capped safety boots

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Technical Data

Operating frequency	43 kHz
Wheel detection equipment supply voltage	30 V DC to 72 V DC
optional	26 V AC to 50 V AC
Signal frequency f_1	3.60 kHz
Signal frequency f_2	6.52 kHz
Standoff voltage	10 kV DC to rail
Ballast resistance	0 Ω to ∞ Ω
Rail profiles	S49, S54, UIC 60, R65, RE100, RE115, etc.
Ties	wood, steel, concrete
Mounting of double wheel detector	at rail web, in crib or over tie
Protective device (optional)	deflector
Ambient temperature range	-40 °C to +80 °C
Output impedance	135 Ω
Power consumption	2.5 kW
Distance between wheel detection equipment and evaluation computer for direct supply (standard)	\leq 6.5 km (permissible cable capacitance max. 325 nF)
for external supply	\leq 21 km (depending on cabling)
Traversal speed	\leq 450 km/h for wheel diameters of \geq 865 mm
Interfaces	1 double wire (pair) to interlocking; star-quad or twisted pair signal cable
Cable length, double wheel detector-trackside connection box	approx. 5 m, optional 10 m, 15 m
Dimensions of trackside connection box	360 x 360 x 160 mm



Siemens Industry, Inc.
 Rail Automation
 2400 Nelson Miller Parkway
 Louisville, KY 40223
 Tel: +1 800 793 7233
www.siemens.com/rail-automation

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