

AxleRing

AR 1

Smart wagon solution main unit. Built-in self-charging for continuous GPS tracking, axle monitoring, local RF sensor reading and on-line internet connection.

Usage and characteristics

- For railway wagon axles
- Odometer counted by axle turns
- Unique ID allows axle or wagon identification
- GPS online tracking
- Self-charging (patented energy harvesting)
- Simple installation by connection around axle
- Axle vibration detection / flattening wheel warning
- G-shock detection
- Axle blocking detection
- Local RF sensor router
- On-line GSM connection

Types available

TYPE	GSM
AR 100 X00	2G / 3G
AR 101 X00	2G
AR 102 X00	3G
AR 103 X00	4G*

* 2Q 2019

Local RF sensor interface

X = 0	-
X = 1	2,4 GHz
X = 2	433 MHz
X = 3	Bluetooth 4





Technical parameters

GSM	QuadBand 2G – 3G	850/900/1800/1900 MHz
		850/900/1800/1900/2100 MHz
		800 MHz
	SIM	Chip
	Types of communication	GPRS to Positrex VPN
	GPRS internet connectivity	Class 12
		Static & dynamic IP VPN, UDP protocol
		128bit security encryption key
		FW upgrade
		Configuration settings
On-line value reading		
Report memory reading		
Control		
GNSS	GPS a Glonass	66 satellites
Antennas	GPS a Glonass	Internal
Internal sensors	Number of revolution	Exact odometer
	Vibration pattern record	Flattening wheel detection
	G-shock detection	Track quality detection
	Incline	Anti-theft Detection
	accelerometer	Blocked wheel detection
RF sensor interface	Temperature	Bearings, breaks, load space
	Humidity	Load space humidity record
	Accelerometer	G-shock record
	Magnetometer	Open/close valve or door, load
	Air pressure	Break circuit, tank fullness
Internal memory	Flash 512 kB	Capacity 5000 events or GPS positions
Dimensions	Plastic ring (inner diameter/outer diameter x width)	∅195 mm / ∅284 mm x 100mm
	Axle diameter	for ∅150 mm, ∅175 mm, ∅191 mm
Temperature range		-35°C up to +70°C
Protection class	Ip66	Waterproof
Weight		450 g