

AR1 AxleRing

PATENTED SELF-CHARGING GPS UNIT FOR
MONITORING AND ASSET TRACKING OF RAIL AND
TRANSIT CARS

USAGE AND CHARACTERISTICS

- » For railway wagon axles
- » Odometer counted by axle turns
- » Unique unit ID allows axle or wagon identification
- » GPS online tracking at 1min interval
- » Self-charging (patented energy harvesting)
- » Simple installation by connection around wagon axle
- » Overheating and vibration detection
- » G-shock detection
- » Axle blocking detection
- » RF sensor interface for up to 100 wireless sensors



TYPES AVAILABLE

TYPE	GSM
AR 100 200	2G
AR 100 000	2G/3G
AR 101 200	4G NB IoT*

* Narrowband

ACCESSORIES

MS1	Multisensor BT 5.0
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Photo from installation of AxleRing

TECHNICAL PARAMETERS

GSM	QuadBand 2G – 3G – 4G	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 / GLONASS	66 satellites
ANTENNAS	GPS, GSM, RF	Internal
SENSORS	3 dimensions G sensor	Number of turns
		Detection of Axle vibratons
		G-shock detection
		Anti-theft Detection
		Blocked axle detection
WIRELESS SENSOR INTERFACE	2,4 GHz Range 30 m	Bearing box temperature -35°C up to +80°C
		Loading sensor
		Open/Closed sensor
		Axle state sensor
		G-shock sensor
		Ambient light sensor
		Ambient temperature sensor
		Humidity sensor
INTERNAL MEMORY	Flash 512 kB	Capacity 5000 events or GPS positions
DIMENSIONS	Plastic ring (inner diameter/outer diameter x width)	ø195 mm / ø284 mm x 100mm
	Axle diameter	for ø150 mm, ø175 mm, ø191 mm
TEMPERATURE RANGE		-35°C up to +80°C
PROTECTION CLASS	IP66	Waterproof
WEIGHT		450 g