



DYNAMIC ROTARY UNION TPMS

Integrated tire pressure & temperature monitoring,
engineered for your fleet.



Dröv Dynamic Rotary Union TPMS Sensor

Real-time tire intelligence for the connected trailer. | drovtechnologies.com



INTELLIGENT TIRE MONITORING FOR COMMERCIAL TRAILERS

The Dröv Dynamic Rotary Union TPMS is a wireless, battery-powered sensor that continuously monitors tire pressure, temperature, and motion at every wheel-end. Data is transmitted over Bluetooth® Low Energy to the Dröv AirBoxOne gateway and delivered to the Dröv fleet platform — giving fleets real-time visibility, automated leak and blowout alerting, and the ability to manage tire pressure across the entire trailer. Built for the harsh realities of over-the-road service, it is engineered specifically for the Dröv connected-trailer platform.

BLE 5.1

Long-range wireless

IP67

Sealed & rugged

-40°C → +85°C

Operating range

±0.6 psi

Pressure accuracy

KEY FEATURES

- MEMS-based dual pressure sensing with on-board temperature measurement
- Bluetooth Low Energy (BLE) 5.1 wireless communication
- Integrated accelerometer for automatic moving / parked mode switching
- Automated tire leak and blowout event detection
- Two-way valve enables remote inflate and deflate through the wheel-end
- LED status indicator for quick troubleshooting
- Field-replaceable CR2477X lithium coin-cell battery
- Sealed IP67 housing built for commercial trailer environments

APPLICATIONS

- Commercial trailer tire monitoring — dry van, reefer, flatbed, tanker
- Fleet tire health & safety monitoring via the Dröv web portal
- Automated tire leak and blowout event alerting
- Tire pressure management and maintenance planning
- Dual-wheel and super-single wheel-end configurations

HOW IT WORKS

Each wheel-end sensor measures tire pressure and temperature and broadcasts the readings over Bluetooth Low Energy. The Dröv AirBoxOne gateway on the trailer collects data from every sensor and relays it to the Dröv cloud platform, where pressure, temperature, alerts, and historical trends are displayed in real time. An integrated two-way air path allows the system to remotely inflate and deflate tires under AirBoxOne control, while an on-board accelerometer automatically adjusts reporting rates between parked and moving states to optimize battery life.



TECHNICAL SPECIFICATIONS

Pressure & Temperature Sensing

Parameter	Value
Pressure Sensing Range	0 – 1400 kPa (~203 psig)
Pressure Accuracy	±4 kPa (±0.6 psig)
Pressure Resolution	~0.2 kPa (~0.03 psig)
Pressure Reading Type	PSIG (gauge pressure)
Temperature Range	-40°C to +85°C
Temperature Accuracy	±3°C

Electrical

Parameter	Value
Battery Type	CR2477X, 3 V Lithium Manganese Dioxide (Li-MnO ₂)
Nominal Voltage	3.0 V
Power	Single coin cell; low-power design for long unattended service

Operating Modes & Reporting

Mode	Description	BLE Reports / hr
Moving	Vehicle in motion (accelerometer-detected)	20
Parked	Vehicle is stationary (15 min after last motion)	12
Leak Detection	Pressure drop exceeds leak threshold	180
Blowout Detection	Rapid pressure loss event	720

Leak and blowout alerts are transmitted for 5 minutes; reporting rates automatically adapt to driving conditions to maximize battery life.

WARRANTY & SUPPORT

The Drōv Dynamic Rotary Union is backed by a two (2) year limited warranty from the date of purchase, covering the rotary union assembly and integrated TPMS sensor. Returns are handled through Drōv's Return Materials Authorization (RMA) process, including prepaid return shipping on approved claims.

For technical support and troubleshooting, contact support@drovtechnologies.com.

For sales, contact sales@drovtechnologies.com

Drōv Technologies | dovtechnologies.com | Oklahoma City, OK

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