

Neuron THS Tyre Health Sensor (TPMS)

Neuron Tyre Health System (THS), is a new way to monitor, analyse and manage the tyre health of large vehicles. This solution improves fuel economy and reduces emissions and microplastics pollution, enhance road safety, increase the lifetime of tyres and decrease the downtime of trucks and trailers.

Features and benefits

- Online – Warning to both driver and fleet manager. Real-time temperature and pressure monitoring.
- Monitor entire fleet of trucks, trailers and buses. Predict and plan maintenance.
- Easy and efficient installation. Magnetic fixing, no need for glue.
- Up to 5 years of battery life*
Easy to re-use in new tyre.
- Early warning of slow-leaks. Prevents unwanted stops and tyre explosions.
- Approved for use on ADR vehicles. Enhanced safety transporting dangerous goods.

*Calculated at normal use and temperatures

Essentials

| | |
|--------------------------|---------------|
| Measuring Range | 0-25 bar |
| Measuring Frequency | Every 10 sec |
| Report Frequency | Every 2 min |
| Expected Operating Time* | Up to 5 years |

*Calculated at normal use and temperatures

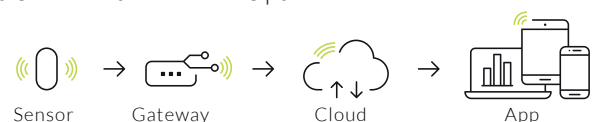


Typical Applications

- Timber transport
- Heavy haulage
- Other long distance transport with heavy load, where tyre pressure is crucial.

General Description

Real-time, online monitoring provides a wide range of benefits compared to standard TPMS solutions. Neuron THS monitors the tyre health of large vehicles continuously. Warning by email, app notification and LED indicator if deflation occurs, not only when driving but also when the vehicle is parked.



The system collect and analyse tyre health data from your entire fleet to reduce wear and cost of tyres and fuel consumption. You can easily handle change of trailer and tyres in the app on your smart phone or on web, and compare tyre performance brand by brand. THS detects defects in wheel alignment and brakes, and helps you to plan maintenance and decrease downtime.

Due to our unique Tap & Tell solution, THS is extremely quick and easy to install.

The system consists of:


- A sensor for each tyre that is fitted inside the wheel
- A gateway communicates wirelessly with each sensor*
- LED Indicator to be placed in cab
- An ambient sensor with bracket
- Cable (14 meters) for power supply
- App and web access for monitoring

* Some trailers may require a separate gateway to achieve full coverage of all sensors. There is no additional license cost for additional gateways.

Principle of Operation

The sensors communicate with a gateway placed underneath the vehicle, that transmits the measurement data over the cellular network to the cloud where the data is stored and accessible for the user. Normally the sensors measure every 10 second and transmit data every other minute. If the pressure should drop more than 0.2 bars within 10 second, the sensor will transmit immediately, and the reading will be pushed through the gateway instantly.

The gateway is fitted with an eSIM with automatic roaming. This means that the gateway automatically chooses the best cellular network in the area ensuring excellent cellular connection at all time.

The symbol  on the product label refers to this data sheet for important information regarding intended use, requirements for the operating environment etc. If the equipment is used in a manner not specified by El-Watch, the protection provided by the equipment may be impaired.

Technical Specification

Operational Specification

Neuron THS Sensor

| | |
|-----------------------------|--|
| Measuring Range | 0 - 25 bar |
| Measuring Range Temperature | -40 - 105°C |
| Resolution | 0.1 bar / 1 °C |
| Measuring Frequency | Every 10 sec |
| Report Frequency | Reports every 2 min |
| Operating Environment | Temperature: -40 - 125 °C Relative humidity: 0-100% Altitude < 2000m above sea level Pollution degree 4 |
| IP-grade | IP67 |
| Cleaning | Wipe clean with a damp cloth |
| Radio Frequency | 863-870 MHz |
| Battery Type | Li-SOCI2, 3.6V |
| Expected Operation Time* | Up to 5 years |

*Calculated at normal use and temperatures

Neuron THS Gateway

| | |
|-----------------------|--|
| Operating voltage | 10-32 VDC, Max. 5W |
| Operating Environment | Temperature: -40 - 75 °C Relative humidity: 0-100% Altitude < 2000m above sea level Pollution degree 4 IP67, wet conditions. |
| Radio Frequency | 863-870 MHz |

Physical Specification

| | Neuron THS Sensor | Neuron THS Gateway |
|------------|-------------------------------|-------------------------|
| Materials | Polyuretan / Neodymium magnet | Nylon 6/6 |
| Dimensions | DxH : 51x15mm | LxWxH: 131 x 115 x 33mm |

Ordering Information

| | 868MHz Europe/The Middle East/Africa Part number |
|--|--|
| Neuron ADR Startkit incl. 6 tyre sensors | 422255 |
| THS ADR Sensor, comes in 2 pack | 422254 |


Subscription

| | |
|---------------------|-----------|
| 1 year subscription | ELW422301 |
| 2 year subscription | ELW422302 |
| 3 year subscription | ELW422303 |
| 4 year subscription | ELW422304 |
| 5 year subscription | ELW422305 |

Accessories/Spare parts

| | |
|--------------------------------|--------|
| THS Gateway | 421940 |
| THS bracket for Gateway | 422206 |
| THS bracket for ambient sensor | 422203 |
| THS Pigtail 14m | 421969 |
| THS Rubber Socket | 422522 |
| THS Dashboard LED | 422205 |

Regulatory

| Certifications | Directives/Standard |
|---|---|
|  | RED 2014/53/EU Radio |
| ADR | EN 60079-0:2012/A11:2013 and EN 60079-11:2012 |
| ECE TYPE-APPROVAL | |

Installation

The sensors are equipped with a magnet that fix the sensor to the cord inside the tyre. This means that when retrofitting the sensor, the tyre does not need to be taken of the rim, just push the tyre in at one side and the sensor is easily placed inside. This also means that the sensor can easily be moved to a new tyre when change is needed. We recommend to use the THS Rubber Socket to fix the sensor inside the tyre for high speed/high load applications

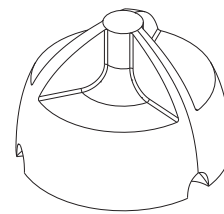
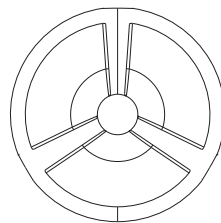
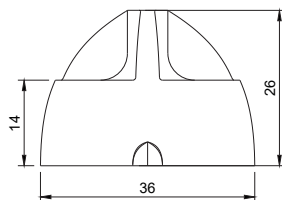
For quick and easy registration of sensors, El-Watch has developed the Tap & Tell solution. Use the app to activate the Tap & Tell mode, then hit the tyre gently with a hammer. The sensor detects the impact and it is registered in correct position on the vehicle.

This implies that the sensors may be fitted inside the tyre prior to mounting it on the vehicle and there will be no confusion about which sensor is in which tyre. This also simplifies the change between summer and winter tyres.

For installation manuals and videos, please visit our website, el-watch.com

Dimensions

Neuron THS Sensor



Neuron THS Gateway

