



Schrader TPM Sensor Overview

The Schrader Electronics TPM (Tire Pressure Monitoring) Sensor is designed to be used in a direct measurement TPM System. The TPM Sensor is intended to interface to a receiver/decoder that has been designed to accept the TPM sensor protocol.

The TPM Sensor is designed to monitor a vehicle's tyre pressure whilst driving or stationary. An electronic unit inside each tyre (referred to as the TPM Sensor or TPM transmitter) mounted to the valve stem, periodically measures actual tyre pressure/temperature. By means of an RF link, this pressure information is transmitted to a receiver/decoder. The incoming radio frequency signals are decoded, and the data used to inform the driver of the tyre pressure information via the vehicles TPM interface.

The main functions that the TPM Sensor will perform are:

- Regularly measure the tyre pressure.
- Monitor if the wheel is moving.
- Periodically transmit tyre pressure using an RF link and a specific protocol.
- Monitor condition of the battery and notify the system during an RF transmission if the battery performance degrades.
- Notify the system if there are abnormal pressure variations (leak) in the tyre.
- Monitor the transponder input for valid LF field timing
- Modulate an externally applied 125 kHz LF field in the same format as the RF transmission (known as LF Read-back).