

User Manual / Functional Description

of the

Continental

Tire Pressure Wheel Unit

Type

TIS-04-ASK 315MHz

1. SYSTEM OVERVIEW

Tire pressure monitoring system (called also TG for Tire Guard) is composed by:

- a tire guard wheel unit including an integrated pressure, temperature and acceleration sensor and a RF transmitter.
- a RF receiver unit (not described in this document)

TG monitors the pressure of vehicle tire when driving or when it is stopped. An electronic unit (wheel unit) mounted inside the tire periodically measures the current pressure. Thanks to a RF link, this pressure information is transmitted to the RF receiver/decoder.

2. TECHNICAL DESCRIPTION

Carrier frequency:	315MHz (± 32 kHz)
Frequency FSK deviation:	± 40 kHz
Number of channels:	1
Type of modulation:	Amplitude Shift Keying (ASK)
Baud rate:	9600 bds
Rated Output Power:	< 10mW
Antenna:	Internal
Voltage supply:	1 Lithium battery 3V (CR2050)
Voltage supply range:	2.1 up to 3.2V

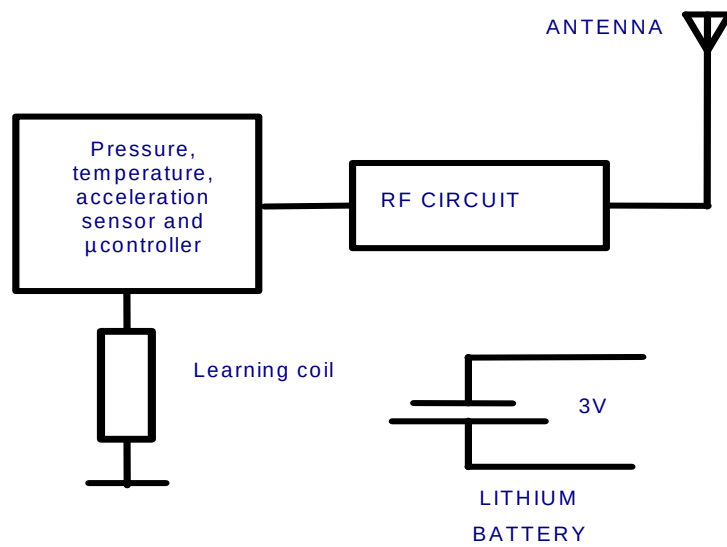
3. TYPICAL USAGE PATTERN

3.1 AVERAGE FACTOR CALCULATION (Standard 47 CFR Part 15C (periodic intentional transmitter))

$$\begin{aligned}\text{RF frames maximum duration} &= 10.3\text{ms} \\ \text{Averaging factor} &= 20 \times \log(10.3/100) = \underline{\underline{-19.7\text{dB}}}\end{aligned}$$

4. BLOCK DIAGRAM

The block diagram below shows the main electronic units of the wheel unit:



5. PICTURES



Label

6.1 EU



Continental
TIS-04-ASK

6.2 USA

Continental
TIS-04-ASK
FCC ID: KR5TIS-04-ASK

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

6.3 CANADA

Continental
Model: TIS-04-ASK
IC: 7812D-TIS04ASK

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Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) l'appareil ne doit pas produire de brouillage;*
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Toutes transformations ou modifications non expressément autorisées par l'autorité responsable de l'appareil pourraient faire perdre à l'utilisateur son droit à utiliser cet équipement