

February 03, 2014

GE
24175 Research Dr.
Farmington Hills, MI 48335-2642
Tel 248.478.7210
Fax 248.699.4241

RE: Certification for Chrysler MY2014 KL/DS Sensor
FCC ID: GQ4-70T
Canada IC: 1470A-51T
Model #: 231008, 231674 (2 variants)

GENERAL DESCRIPTION

This TPM sensor is a transmitter device with tire valve, which is mounted in the valve hole of the wheel rim and transmits the pressure and temperature inside the tire, the battery voltage of the transmitter, and the tire identification code (ID) at normal and abnormal condition with the radio wave (RF) that conforms to the used country. Also this device has a delay of the transmission time so that the RF signal from each tire will not interfere due to the simultaneous transmission. The transmitter device also has a Low Frequency (LF) receiver. This receiver supports Low Frequency (LF) magnetic field communications allowing the changing of measurement/monitoring states of the transmitter by commands sent via the TPM diagnostic tool. The RF signal operates at 434MHz and uses FSK Manchester code modulation. This sensor transmits 4 RF packets as defined in the table below.

Description of Operations

Mode of Operation	Explanation	Frequency of Transmission
Off Mode	No transmission. Measures pressure, temperature & battery voltage.	<ul style="list-style-type: none"> • Transmit 4 words when activation occurs with TPM diagnostic tool
Park Mode	Measures pressure, motion. Temperature & battery voltage is measured prior to transmission. Enters this mode/state when <ol style="list-style-type: none"> 1. Pressure goes above pressure threshold in Off Mode or 2. No motion is detected for 15 minutes in Interim Mode. 	<ul style="list-style-type: none"> • Transmit 4 words when activation occurs with TPM diagnostic tool. • Transmit 4 words when delta Pressure is seen. 2 ASK words followed by 2 FSK words
Local Z Mode	Measures pressure, motion, temperature, battery voltage Enters this mode/state when <ol style="list-style-type: none"> 1. When Motion is detected while in Park mode. 2. When motion is detected while in Interim mode within 15 minutes and Local Z is not complete. 	<ul style="list-style-type: none"> • Transmits 36 valid messages, 4 words /message. The first 18 messages will transmit every 16 seconds, the next 18 messages will transmit every 24 seconds • 4 words when activation occurs with TPM diagnostic tool
Drive Mode	Measures pressure, motion, temperature, battery voltage Enters this state when <ol style="list-style-type: none"> 1. LocalZ has completed. 2. When motion is detected while in Interim mode within 15 minutes 	<ul style="list-style-type: none"> • Transmit 4 words every 64 sec. • Transmit 4 words when delta pressure is seen. • Transmit 4 words when activation occurs with TPM diagnostic tool
Interim Mode	Measures pressure, motion. Temperature & battery voltage is measured prior to transmission. Enters this mode/state when <ol style="list-style-type: none"> 1. No motion is detected while in LocalZ or Drive mode. 	<ul style="list-style-type: none"> • Transmit 4 words when activation occurs with TPM diagnostic tool. • Transmit 4 words when delta Pressure is seen. . 2 ASK words followed by 2 FSK words