

# User Manual

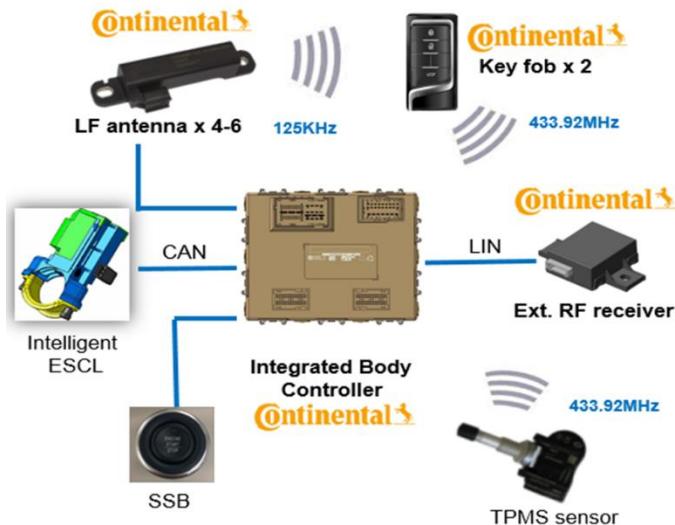
## IBC H6315

### Contents

General Product Functional Description .....	2
System Diagram (Master variant) .....	4
Connector PIN assignment.....	7
Technical description.....	8
LF output .....	9
Regulatory compliance notes .....	10

## General Product Functional Description

The IBC system consists of IBC ECU (Integrated Body Controller) and RFR (RF Receiver) and LF antennas, with additional SSB, FOB, ESCL build typical application as below, includes both traditional



IBC ECU, LF antenna, RF receiver and Key fob supplied by Continental, others part are purchasing by OEM directly.

- IBC ECU: traditional BCM + PEPS without RF receiver
- RFR: receive 433MHz RF signals
- Key Fob: 433M transmitter and 125K receiver
- LF Ants: cooperate with IBC ECU to 125K complete LF transition.

BCM and PEPS functions.

The main features of IBC system including:

- External Lights Control
- Internal Lights Control
- Front/Rear Wash and Wiper Control
- Door lock/unlock Control
- Mirror Fold/Unfold Control
- Defroster Control
- HMI Setting
- Body Anti-Theft Warning System
- Passive Start & Entry (PASE)
- Electronic Steering Column Lock Control (ESCL)
- Terminal State Control (TCC)
- Remote TCC Control
- OTA TCC Control
- Immobilizer (Limp Home mode)
- Polling Access Control
- RKE
- TPMS Receiver
- CAN/LIN Routine
- Diagnostics
- Etc.

Relevant for Homologation is the wireless system, 125K LF transmitter and 433M Receiver

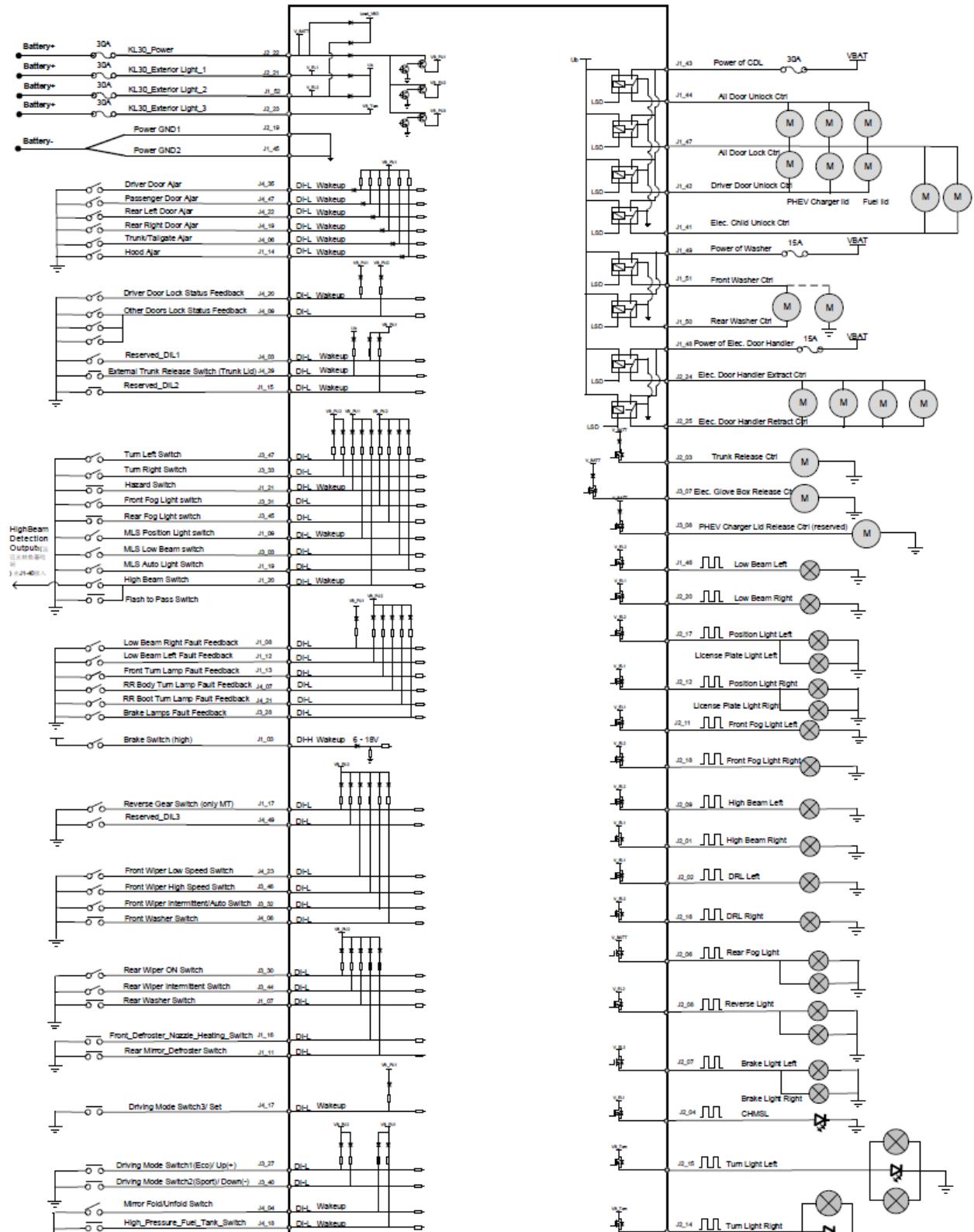
- 125KHz: which triggers LF antenna(s) mounted at intended locations on the vehicle, LF antenna(s) are controlled by IBC ECU by internal driver circuit to transmit 125 kHz telegrams.

- 433MHz: which is send by FOB or TPMS in respective work mode, typical case is remote access through FOB in vehicle TCC OFF mode, TPMS signal receive from TPMS sensor in vehicle TCC ON mode.

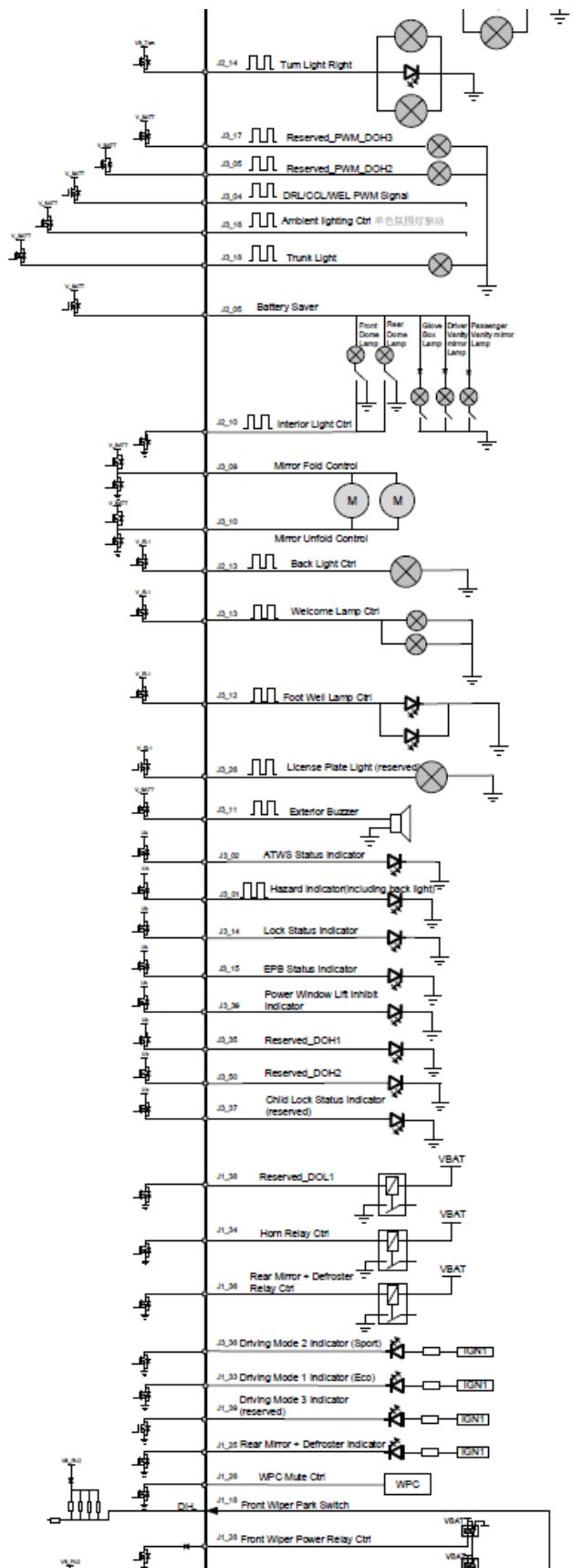
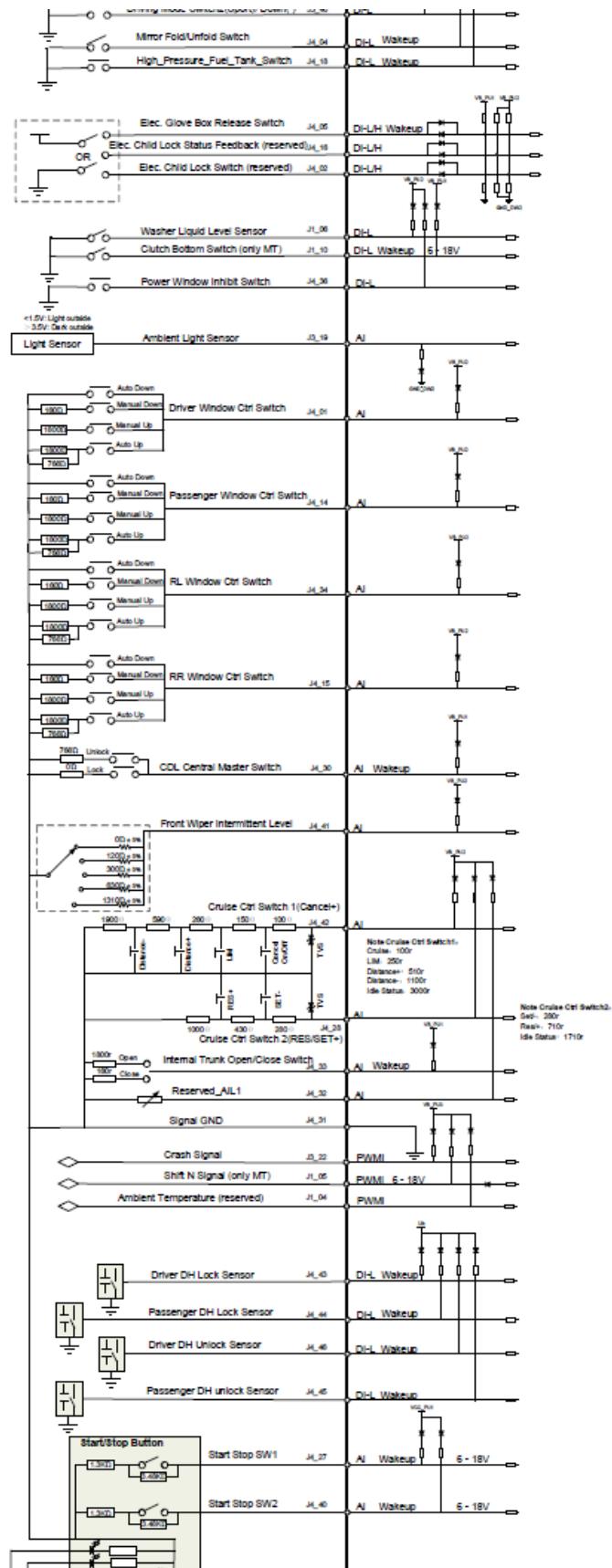
To adapts vehicle special application, IBC ECU and LF antennas have multi configs/variants on actual application likes:

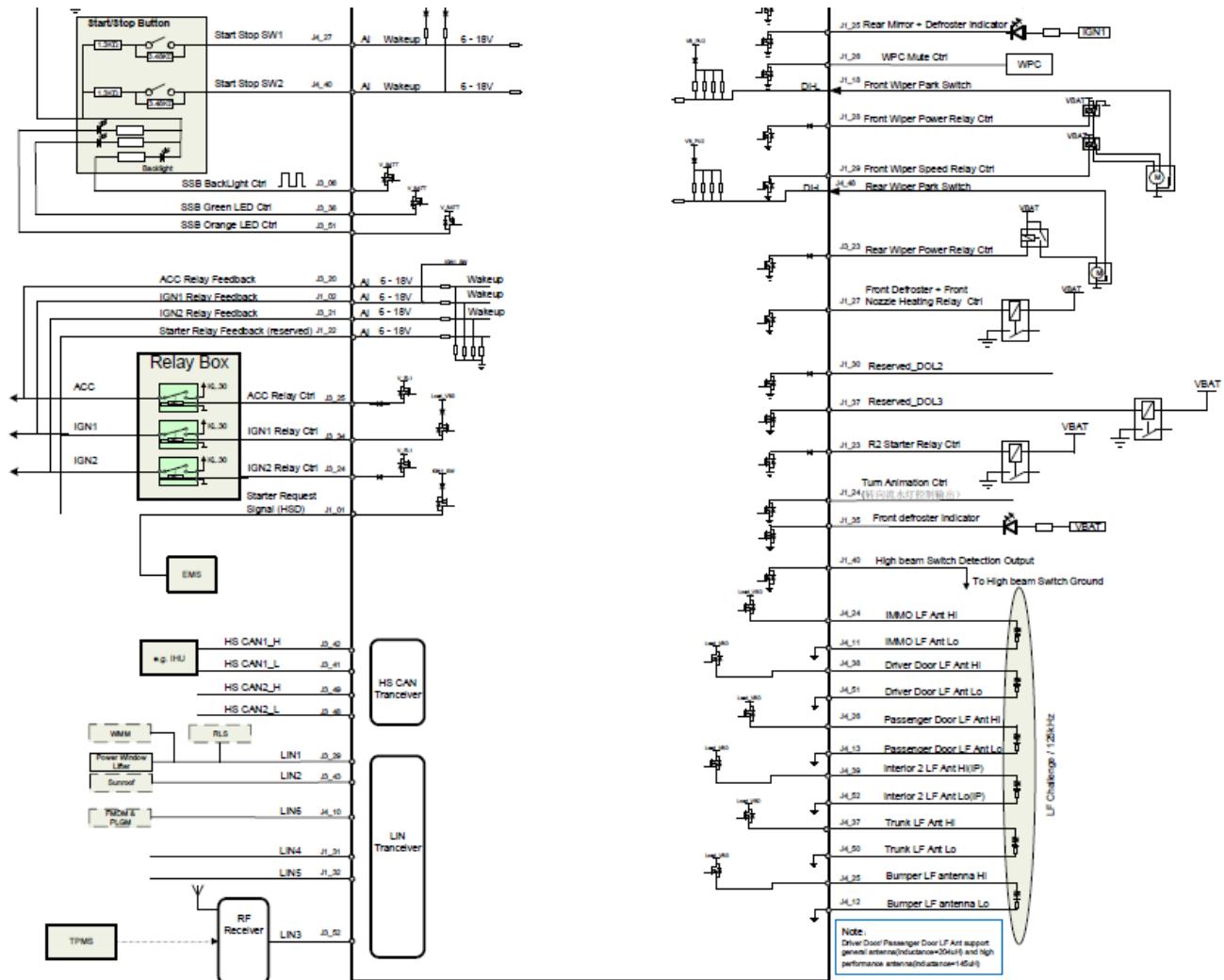
- IBC ECU have different part number to distinguish application software and hardware; for HW all variant are using same PCB main difference is components population likes High Side Driver quality, Hi variant have max amount drivers for the highest profile vehicle; for SW the difference is only specific vehicle LF tuning data according to vehicle type and LF quality.
- LF antenna(s) quality depends on vehicle type and config, max6 and min1 ant(s) mounted at intended location on the vehicle, mainly divided into internal ANTs and external ANTs to realize LF signal coverage over whole vehicle.

## System Diagram (Master variant)

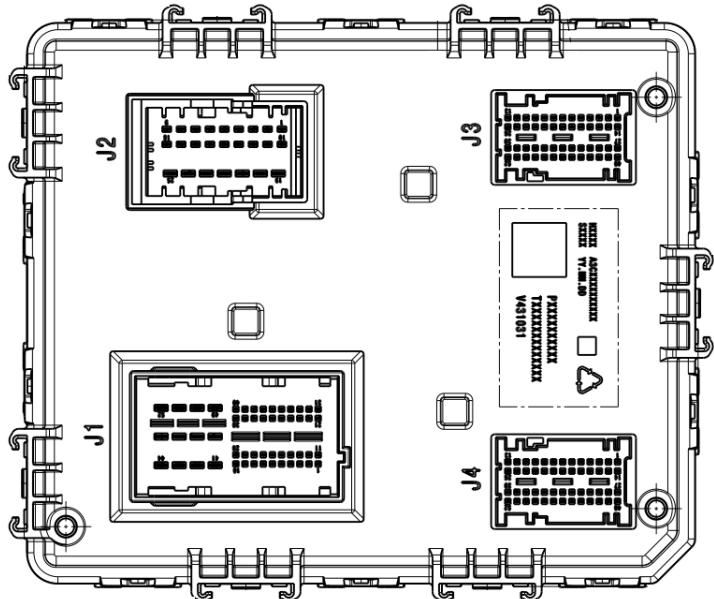


Confidential





## Connector PIN assignment



Confidential

## Technical description

### 125K Transmitter

Carrier frequency: 125kHz  $\pm$  5kHz  
Modulation: ASK  
Supply voltage: DC9V~16V  
Operating Temperature: -40°C to 85°C  
Type of battery: car battery  
Range: < 2.0 m

### 433M Receiver

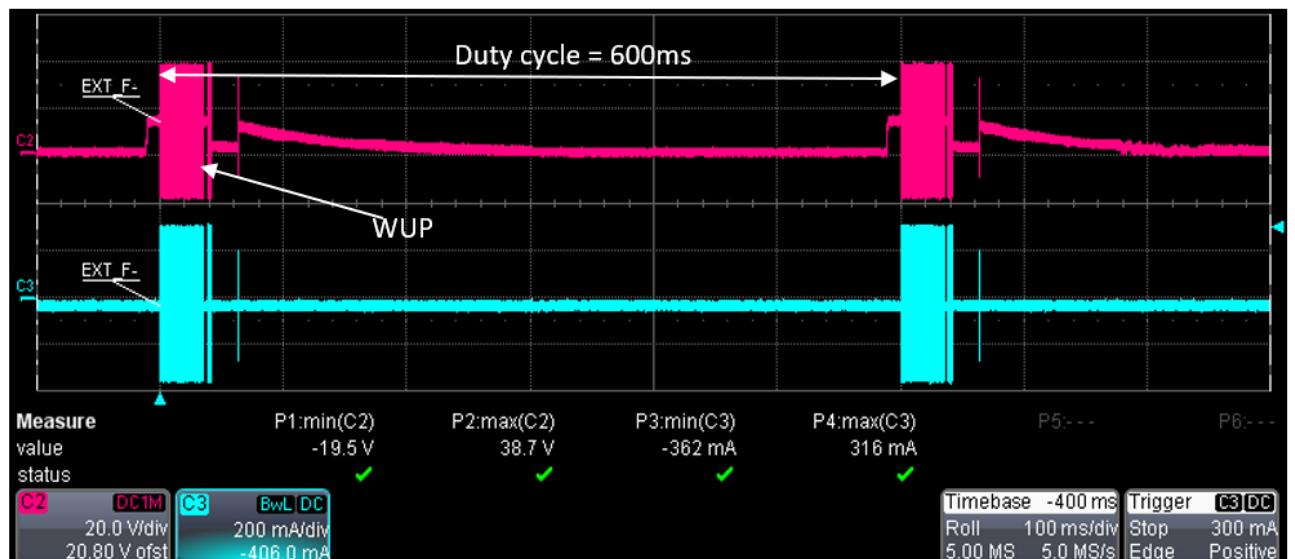
Carrier frequency: 433MHz  $\pm$  Hz  
Modulation: FSK  
Supply voltage: DC9V~16V  
Operating Temperature: -40°C to 85°C  
Type of battery: car battery

## LF output

The LF output scenario used for Homologation is in accordance to the max. possible 6\*LF Ant(s) config output power regarding telegram length and duty cycle at a time.

- The transmission period is 600ms(560ms) and shall simulate the Start Authentication under worst case conditions regarding the minimum amount of learnt keys an maximum amount of retry triggers.

Transmission period: 600ms		
Telegram	Duration	Code
Start Authentification (WUP)	35ms	Manchester
RSSI	3ms	CW
Antenna diagnosis		CW
Blinktelegram	16ms	Manchester
Antenna diagnosis		CW





## Regulatory compliance notes

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.