



**Technical Description
and Users Manual
of the
PL7 ID Device Redesign
Models HUF5766, HUF5767, HUF5768**





Usage of the PL7 ID Device Redesign

The PL7 ID Device Redesign will be used in several classes of BMW.

General description of the RF transceiver PL7 ID Device Redesign

The RF remote control consists of a RF transceiver. The PL7 ID Device Redesign is used to transmit the information for locking or unlocking the vehicle by a bi-directional RF transmission for normal remote operation by pressing a button and via a LF Wake Up.

In general the following functions are provided:

- Lock the car
- Unlock the car
- Unlock the trunk of the car
- Activate Panic Function
- Activate Special Function (at 4-button version)
- Engine Start of the car (via LF Wake Up)

For emergency start, when the battery power is too low, the PL7 ID Device Redesign has a bi-directional LF-Transponder interface.

Power supply

The PL7 ID Device Redesign is provided with 1 Lithium battery (CR2450) that gives a power supply of nominal +3V.

Buttons

There are three to four buttons which enable to lock and unlock the doors, to unlock the trunk and activate a special function (e.g. panic-function of the car) when applied. During activation, the button is forced to the ground via a “pull-up” within the microcontroller.

Protocol Overview

After a button-push the PL7 ID Device Redesign transmits a RF-code-telegram. When the car acknowledges the success of the transmission the PL7 ID Device Redesign starts the comfort-telegram, which is repeated until the button is released or the timeout is reached. When the car doesn't acknowledge the success of the transmission then the RF-telegram is repeated on the second channel (Devices with only one channel repeat on the same channel/frequency). This procedure is repeated 4 times when the button is still pressed.



Typical usage pattern

The typical usage are 10 lock/unlock operations in 24 hours with a typical transmission duration of 0.2 seconds.

⇒ 0.42 lock/unlock operations within one hour

Transmitter ON 0.084 seconds/hour

Transmitter OFF 3599.916 seconds/hour

Duty Cycle: $T_{ON} / T_{(ON+OFF)} \times 100\% = 0.084 / 3600 \times 100\% = \underline{0.002\%}$

Variants

Model	Description
HUF5766	313.15 / 314 MHz variant (2 channels)
HUF5767	433.2 / 434.64 MHz variant (2 channels)
HUF5768	433.92 MHz variant (1 channel)

Technical Data

Carrier frequency model HUF5766	313.15 / 314 MHz
Carrier frequency model HUF5767	433.2 / 434.64 MHz
Carrier frequency model HUF5768	433.92 MHz
Output power model HUF5766	< 250 µW EIRP
Output power model HUF5767	< 80.8 dBµV/m (36 µW \varnothing -14.43 dBm EIRP)
Output power model HUF5768	< 5 mW
Type of modulation:	FSK
Method of frequency generation:	PLL
Number of channels:	1 - 2
LF frequency:	125 kHz
Power supply:	battery (CR2450)
Supply voltage:	Maximum 3.2V
	Typical 3.0V
	Minimum 2.2V
Type of battery:	Lithium
Type of RF antenna:	PCB Loop antenna
Dimensions:	77mm x 40.45mm x 17.8mm
Weight:	48g
Temperature range:	-10°C ... +65°C (Remote function, due to battery)
	-40°C ... +85°C (Transponder function)

Disposal:

An old battery must be lodged at a collection point or the service.



NOTES in Owner Manual:

Canada:

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.

USA:

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.