

# WINNERCOM

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## CE NFC Touch Door Handle User Manual

V 1.0



Winnercom Co., Ltd.

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# 1. Introduction

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- Door handle Module (DHS)
- NFC & Capacitive Touch
- Pocket Light LED
- Hi-Speed CAN

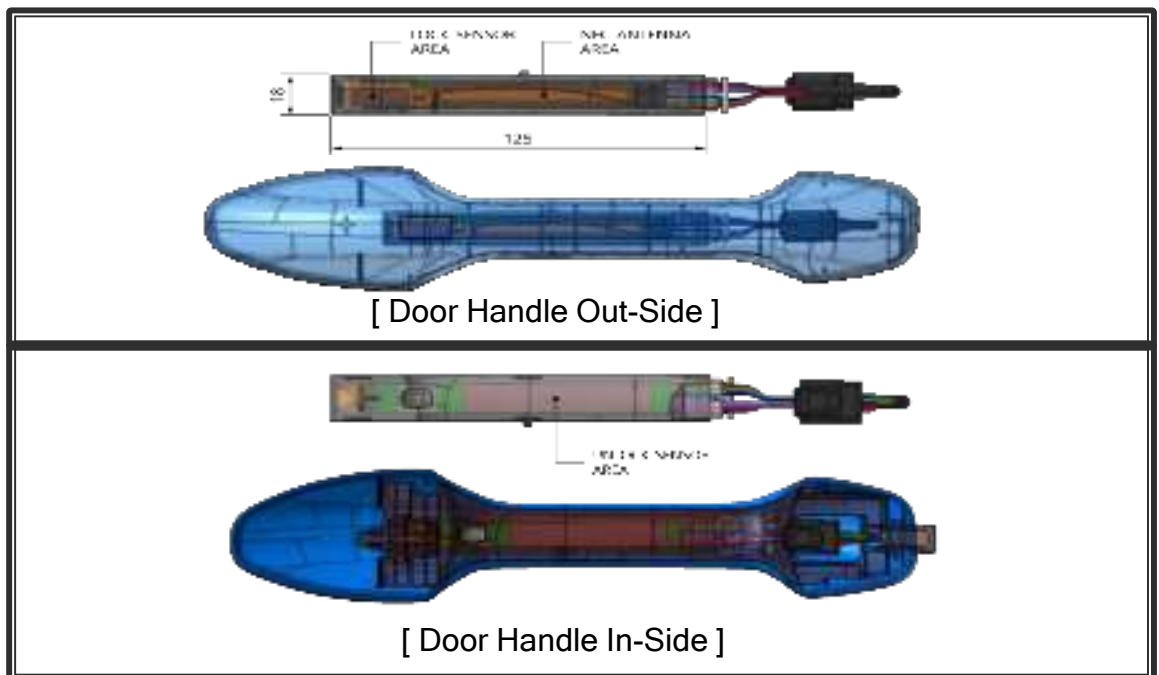


The door handle module for Automotive has a NFC Reader and lock/Unlock 2Channel Capacitive touch Sensor function.

This module is installed inside of the door handle covers and will be attached to the outside door panel.

This module is communicated with CAN network which enables to connect to the car network to send the signal of lock and unlock of door and Pocket light LED On/Off control.

It receives DC power from car battery at all time.



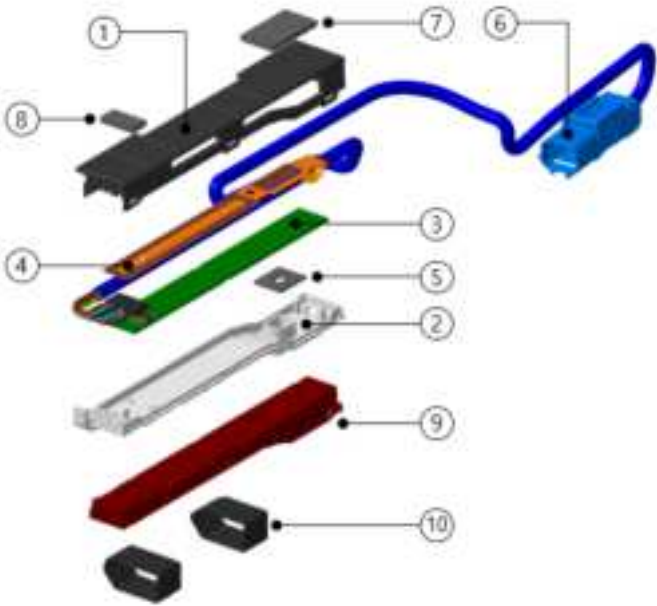
[ Assembled cover and DHS]

## 2. NFC DHS Design(BOM) & Application

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### CE - NFC Touch Door Handle

| ITEMS      | SPECIFICATION                                                                                                        |
|------------|----------------------------------------------------------------------------------------------------------------------|
| Size       | 125 x 18 x 20 mm (Length x Width x Height)                                                                           |
| Color      | Black                                                                                                                |
| Weight     | 53g +/- 2.2%                                                                                                         |
| Waterproof | Polyurethane full potting inside of module. Protective of humidity ,vibration, waterproof.                           |
| Material   | Case : PA6+GF15% , ABS / PRESS : SPTE(Tin-Plating) / PCB : FR-4, 4Layer /<br>Foam Tape : EPDM/ FPCB : Polyimide film |



| NO | Lev | SUB 부품명      | 협력사     | 재질         |
|----|-----|--------------|---------|------------|
| 1  | 1   | CASE UPPER   | 영신화학    | PA6+GF15%  |
| 2  | 1   | CASE LOWER   | 영신화학    | PC         |
| 3  | 1   | PCB ASSY     | TBD     | FR-4       |
| 4  | 1   | FPCB         | TBD     |            |
| 5  | 2   | FOAM PAD LED | 황성산업    | 발포 EPDM    |
| 6  | 2   | CABLE ASSY   | 화성유통유평  | AVSS 0.35G |
| 7  | 1   | FOAM PAD A   | 황성산업    | 발포 EPDM    |
| 8  | 1   | FOAM PAD B   | 황성산업    | 발포 EPDM    |
| 9  | 1   | ANT POTTING  | ESP 케미칼 | UE-917 A,B |
| 10 | 1   | TAPE         | -       | PVC        |

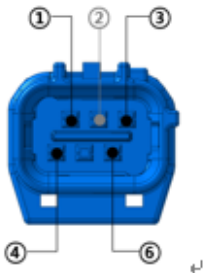
### 3. Attentions

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- Please always mount the Door handle Module before power on the device to avoid circuit damage
- Before power on the Module, check the power supply(Fig. 1)
- Module Input Power connect to the connector(Fig. 1)

- **Type** : 5pin Connector Sealed↵

- **Maker & Part No.:** 경신, HKC05-12737 5P Male Connector(경신\_Blue)↵



| Pin #.↵ | Name↵        | Description↵     | In/Out↵ | Wire Color↵ | I/O Level↵   |
|---------|--------------|------------------|---------|-------------|--------------|
| 1↵      | V Bat(+Vcc)↵ | Power Supply↵    | Power↵  | RED↵        | Battery +↵   |
| 2↵      | L_CAN(L)↵    | CAN Low Signal↵  | I/O↵    | GREEN↵      | 2.5±TBD V↵   |
| 3↵      | TOUCH↵       | LOCK/UNLOCK↵     | O↵      | GRAY↵       | LOCK/UNLOCK↵ |
| 4↵      | L_CAN(H)↵    | CAN High Signal↵ | I/O↵    | BLUE↵       | 2.5±TBD V↵   |
| 5↵      | ↵            | ↵                | ↵       | ↵           | ↵            |
| 6↵      | GND↵         | Electric Ground↵ | Power↵  | BLACK↵      | Gnd↵         |

CAN(HI), CAN(LO) 통신선은 커넥터와 도어핸들 모듈사이에서 트위스트 와이어로 적용되어야 한다.↵  
인치당 1회(360도) 트위스트가 적용 한다.↵

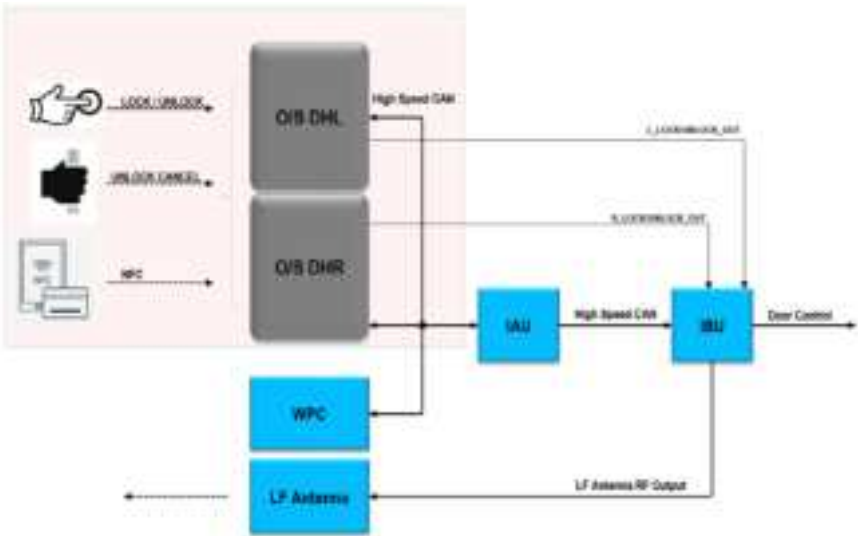
Fig. 1 Connector

# 4. Specifications

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## NFC Touch Data

|                                                                                          |                                      |
|------------------------------------------------------------------------------------------|--------------------------------------|
| Frequency Range                                                                          | 13.56MHz for NFC                     |
| Operating Voltage                                                                        | 9.0 ~ 16.0 [Vdc], Typical 12.0 [Vdc] |
| Current                                                                                  | Max 400mA @ Operation Mode           |
| Operating Temp.                                                                          | -30℃ ~ 75℃                           |
| Storage Temp.                                                                            | -40℃ ~ 85℃                           |
| Symbol  | DC, IEC 60417-5031 (2002-10)         |



[ System Block Diagram ]



## 5. User Information and Instructions

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### FCC Part 15 Compliance information.

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.

### FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

- This product is compliant with the essential requirements and other relevant provisions of the Directive 2014/53/EU.
- This product can be used in which EU members, in accordance with ArticleS10(10).

### Manufacturer information

|                       |                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------|
| Manufacturer name     | WINNERCOM Co., Ltd.                                                                           |
| Address, City:        | HUMAX Village, 216, Hwangsaеul-ro, Bundang-Gu,<br>Seongnam-si, Gyeonggi-do, South KOREA 13595 |
| Product name (type) : | Vehicle active antenna & Touch door                                                           |

