

DNF-01

USER'S GUIDE



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Revision History

| Revision | Issue Date | Author | Scope |
|----------|------------|---------|-----------------|
| 1.0 | 2018/11/16 | J.H.Lim | Initial Release |
| | | | |
| | | | |

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| 3.4.1 | 6 pin Connector <NFC_MX4406NF1> | 오류! 책갈피가 정의되어 있지 않습니다. |
| 3.4.2 | Pin Description..... | 오류! 책갈피가 정의되어 있지 않습니다. |
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1 Warnings for safety operation

This is to protect your safety and property. Please read this manual carefully before using.

■ Operational Environment

- The operating voltage of this products is between 9Vdc and 34Vdc. Please use the specified operating volgage.
- Use within the specified temperature range.
- This product is specialized for industrial vehicles.

■ Insallation Precaustions

- Insallation and wiring require professional skills. Be sure to install it with the help of a proppessional. Incorrect insallation and wiring can cuase the fire or malfuncation.
- When installing the product, install it so that it does not inferfere with the operation of safety devices such as airbags and brake levers...etc.
- Insall in a location free from moisture. It may cuase damage or accidents if it is installed in places where water or rain is splashed or dusty.
- When wiring, be sure to check the position of pipes, tanks, electric wiring, etc., and pay special attention to avoid interference or contact.
- Use specified cables and components.
- Be careful not to fall down when installing in a place where the ceiling and vibration of the vehicle are severe.
- Do not block the vent or heat sink. It may cause the fire.
- Protect the wire tube by winding the insulation tape around the area where the wire is in contact with the metal part. It can cause the fire or electric shock.

■ Important Safety Precautions

- Do not operate the device by manually during the vehicle operation. It can cuase the accidents.
- Any modification of this product is prohibited and will void your warranty. Any use of the product or its components for purposes not expressly authorized by this document is prohibited and will void your warranty.

Allow only authorized personnel to service the unit. Unauthorized service can invalidate the warranty.

2 Hardware

2.1 Picture



3 Specifications

3.1 General

| Item | Specification | Descriptions |
|-----------------------|--|--------------|
| Size | 59.8(W) x 83.3(H) x 24.6(D) | Unit : mm |
| Weight | 78 grams | |
| Operating Temperature | -30°C ~ +70°C | |
| Storage Temperature | -40°C ~ +85°C | |
| Vibration | Random 5~20Hz 0.05g2/Hz, 20~150Hz: -3dB/oct.(1.7g rms), 3-axis, 30minutes for each axis. | |
| Thermal Shock | -40°C(1H)/+85°C(1H), 1cycle- Total24 cycle, 48H, non-operating | |
| Humidity | +70°C/95%/48 Hours, Operating | |
| Input rating | 12 Vdc - 24 Vdc, 1 A | |

3.2 Communication

| Item | Specification | Descriptions |
|---------------|----------------------|-----------------|
| Communication | - UART(RS-232) | |
| I/O | - 6 Pin | Waterproof |
| LED | - 3 LEDs | Power, OK, FAIL |
| Buzzer | - Level: Min. 90.0dB | |

3.3 Accessories

| Item | Specification | Descriptions |
|----------|----------------------------|----------------|
| NFC Card | NFC - A (ISO/IEC14443A) | NFC – B/F type |

3.4 LED

3.4.1 LED Status

| | Mode | Status | RED | GREEN | YELLOW | BEEP |
|---|--------------------------|--|----------|--|--|------------|
| 1 | | Power ON | ON | | | |
| 2 | Normal | Slave Card Recognition Ok | ON | Turns on after 5 seconds and then turns off | | Beep |
| 3 | | Slave Card Recognition Fail | ON | | Turns on after 5 seconds and then turns off | Beep,Beep |
| 4 | Master Card Registration | Master Card Registration Ready | Blinking | Blinking | Blinking | Beep |
| 5 | | Master Card Registration Completed | ON | Blinking | Blinking | Beep |
| 6 | Slave Card Registration | After contact Master Card , Slave Card Registration Ready | Blinking | | | Beep |
| 7 | | After contact Slave Card, UID Read Ok | Blinking | Turns on after 1 seconds and then turns off | | Beep |
| 8 | | After contact Slave Card, UID Read Fail | Blinking | | Turns on after 1 seconds and then turns off | Beep, Beep |
| 9 | | After contact Master Card, Slave Card Registration completed | | Turns on after 3 seconds and then Re-booting | Turns on after 3 seconds and then Re-booting | Beep |

WARNING & SAFETY INFORMATION

Safety Symbols

Warning

- When encountering this symbol in the manual, you must follow these recommendations to avoid irreparable damage to your car, system or connected devices or to avoid accidents with injuries or death.

IC Information

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference

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, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC 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 notification to users

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, the user is encouraged to try to correct the interference by consulting with a dealer or an experienced technician for technical assistance.

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