KYUNGWOO SMK-DWS-00 Doosan Smart Key Controller User Manual

**DOOSAN SMART KEY
CONTROLLER
User' Manual
2022.10.12**

Prepared	Reviewed	Approved
Park jeguk		

Contents

Revision History

| Rev.			
1.0	2018.12.26	First Release	Bae wonsik
2.0	2022.10.12	Correct Frequency (433MHz -> 433.92MHz, 134KHz -> 133KHz)	Park jeguk

Synopsis

This do cument is specifi cally-written manual for SMART KEY CONTROLLER which is receiver and transmitter of wireless communication, which is to confirm user identifications under engine-start limiting function in heavy equipments.
SMART KEY CONTROLLER is defined as followings; SMART KEY CONTROLLER transmits a signal pattern by RFID 133 KHz in order to wake up SMK FOB. And then SMART KEY CONTROLLER communicates with SMK FOB by 433.92MHz wireless signal. SMART KEY CONTROLLER decodes password-secured signals and transfer identification information to certification device which has a function of engine-start limiting, such as Cluster, MCU or ECU, with using CAN protocol

Product Image

1. External Appearance
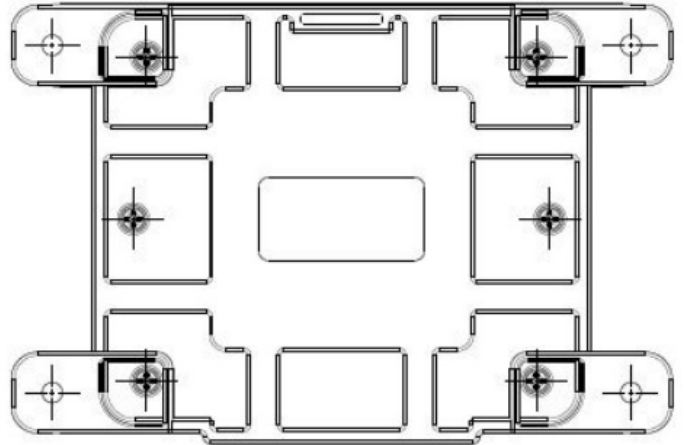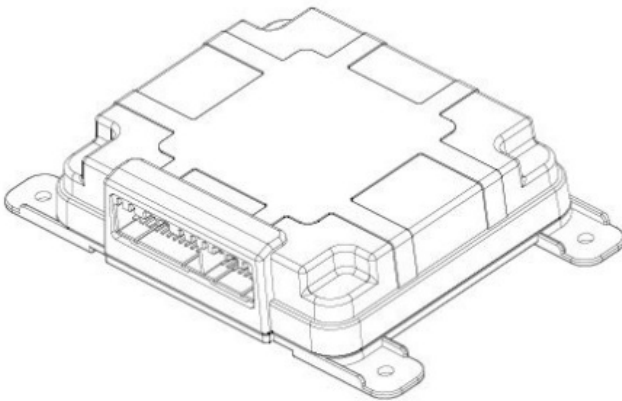
2. Dimension
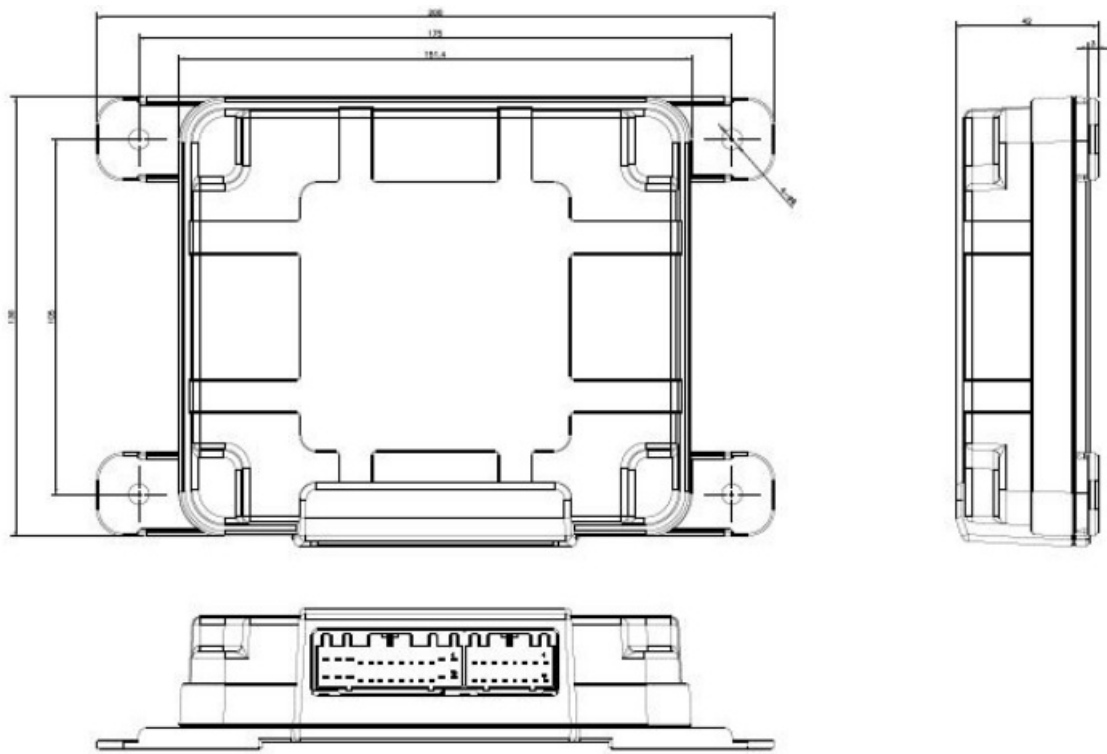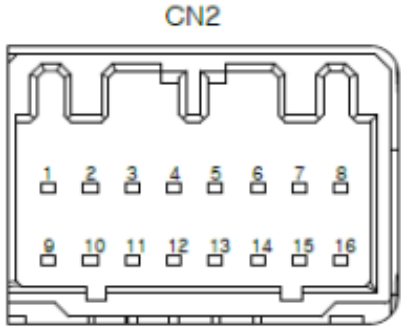
	PIN	Controller Manual	
	1	ACC output	
	2	Key-ON output	
	3	START SIG. output	
	4	Lock Actuator (+)	
	5	Unlock Actuator (-)	
	6	HORN RELAY	
	7	LAMP 1 RELAY	
	8	LAMP 2 RELAY	
	9	N/A	

CN1 **(26-pin)**	10	N/A
	11	Controller (12/24V) (+)
	12	Controller (12/24V) (+)
	13	Release Actuator (-)
	14	N/A
	15	N/A
	16	N/A
	17	N/A
	18	Actuator signal Com.
	19	Controller (12/24V) (-)
	20	Controller (12/24V) (-)
	21	Release Actuator (+)
	22	Release Actuator signal
	23	Wake-up port (From TMS)
	24	N/A
	25	N/A
	26	N/A

CN1
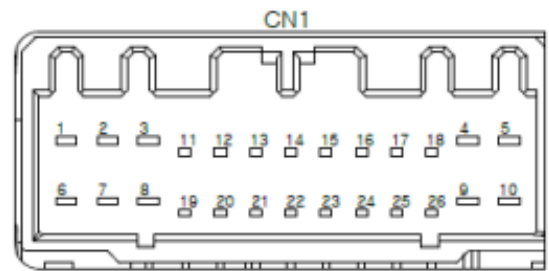
MATE : TYCO AMP 368136-1

CN2 **(16-pin)**	1	HS CAN	
	2	HS CAN L	CN2 MATE : TYCO AMP 368134-1
	3	In DOOR SIGNAL	
	4	DOOR UNLOCK SWITCH SIGNAL	
	5	Button (-)	
	6	Button LF (+)	
	7	Button LF (-)	

	8	Button ■■ (-)	
	9	CAN H	
	10	CAN L	
	11	DOOR ANT (+)	
	12	DOOR ANT (-)	
	13	Red Backlight Signal	
	14	Green Backlight Signal	
	15	Blue Backlight Signal	
	16	BUTTON SIG.	

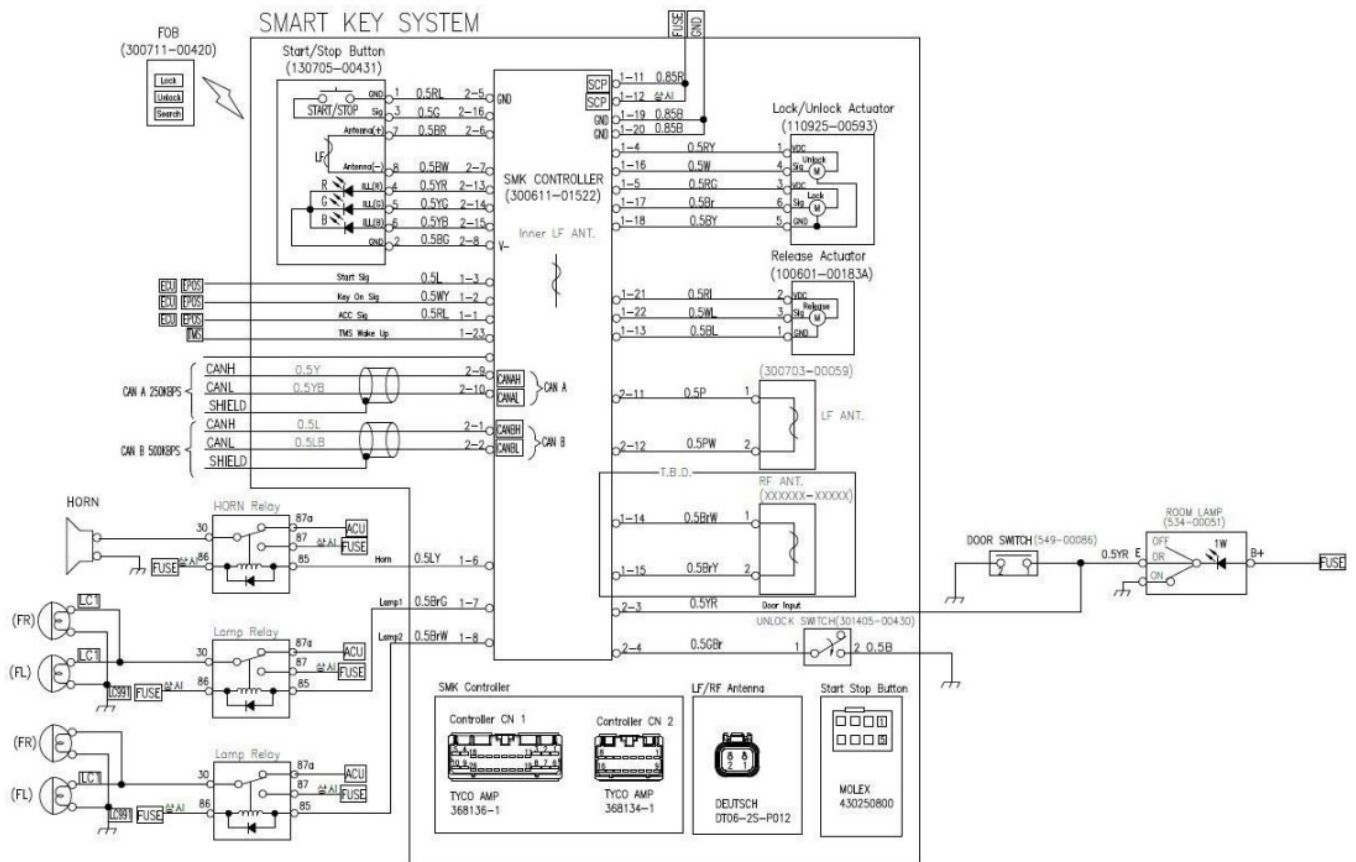## 3) Certification LABEL location

DOOSAN

PRODUCT NAME: SMK CONTROLLER UNIT MODEL NAME: SMK-DWS-00 INPUT : DC 12V ▬▬▬ 180mA / 24V ▬▬▬90mA P/N : 300611-01666 S/W Ver. : 1.0.0.0 LOT No. : 19A17-0110 KYUNGWOO SYSTECH. INC. / KOREA

Block Diagram

4. Specification

4.1. Operating Specification

-. Must transmit a signal of RFID 133 KHz as a wake up pattern signal.

-. Must be activated from 12 Vdc/24 Vdc external voltage supply.

-. Must be able to analyze the password-secured signal.

-. Must be able to use Single channels band of 433.92MHz.

4.2. Power Specification

-. Rated Voltage: 12V▬▬▬ (Max 180mA) / 24V (Max 90mA) both available

4.3. General Specification

-. Storage Temperature: -40℃ ~ 85℃

-. Operating Temperature: -30℃ ~ 75℃

-. Tested Temperature: -30℃ ~ 75℃

-. Water-Proof Specification: IP65 (Connector Face : None Water-proof)

-. Communication with equipment: CAN2.0 250Kbps/500Kbps

(*It is recommended to use twist shield cable and should be connected through a short distance as possible.)

-. Material of Device: PC&ABS

(Substance : LUPOY GN-5001RF BLACK, Flame Class : V0, Manufacturer : LG CHEMICAL)

-. PCB Material

object/part No.	manufacturer/ trademark	Layer /Thickness	Flame Class	standard	mark(s) of conformity
SMK-DWS Controller	JM ELECTRONICS CO LTD	4Layer /1.6T	V-0	UL 796	JM

4.4 RF Specification

Item		Specification
Wireless Data Communication System	**Frequency**	433.92MHz (Single Channels)
	RF Power	Under 1 mW
	Modulation Method	GFSK
	Tested Temperature	-30 ~ +75℃
Magnetic Induction System	**Frequency**	133KHz (Single Channel)
	RF Power	Under 42 dBμA/m @ 10 meter
	Modulation Method	ASK

4.5. Product label Explanation of graphic symbols used

Symbol	Description
	Korea Certification Marking
	Communaute Europeenne Marking
	Electrical waste and electronics equipment
	Federal Communication Commision Marking
	Direct current

5. Postal address:
Kyungwoo Systech Inc. Office: +82-2-985-8085
#401, Daeryung Post Tower 5, 68, Digital-ro 9, Geumcheon-gu, Seoul, South Korea

E-mail: **Webmaster@kyungwoo.com**
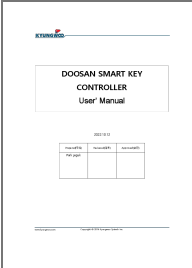
FCC Compliance Statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
RED Compliance Statement
This product is CE marked according to the provision of the RED (2014/53/EU). Hereby Kyungwoo Systech Inc. declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU

Documents / Resources

	KYUNGWOO SMK-DWS-00 Doosan Smart Key Controller [pdf] User Manual SMK-DWS-00, SMKDWS00, ZE8-SMK-DWS-00, ZE8SMKDWS00, SMK-DWS-00 Doosan Smart Key Controller, Doosan Smart Key Controller, Smart Key Controller, Controller

References

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