

PRODUCT SPECIFICATION AND MANUAL

2014.05

BUYER / PROJECT	SYMC / X100 / MT-BCM-01
BUYER MODEL	Unit Ass'y Body control
COMPANY	Mototech Co.,.
MAKER/NATION	Mototech Co.,./Republic of Korea
DRAFT PART	Research Center
DRAFTER	J.H.An

Title	Certification Request Document		
Project Name	X100	Drawn	2014-05-16
		Released	2014-05-16
		Made by	J.H.An

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1. Contents

Type	Weak Signal Equip.
Name	Unit Ass'y Body Control
Use	Utilizing the frequency of 134.2kHz RFID vehicle anti-theft device
Summary	<p>1. This Equip is designed to prevent car theft.</p> <p>2. This Equip & Transponder communicate encryption algorithm mutually for User Authentication.</p> <p>3. This equipment uses semiconductors and integrated circuits that are designed to have a high reliability.</p> <p>4. Main Power use Regulator VCC of BCM.</p>
Composition	<p>1. LF Base Station</p> <p>2. Bobbin Antenna</p>

2. ELECTRONIC SPEC.

item	UNIT	Unit Ass'y Body Control
Rated Voltage		DC 13.5V (TMS3705 DC 5.0V)
Operating Voltage Range		DC 9.0V ~ 16.0V (TMS3705 DC 4.5V~5.5V)
Operating Temp. Range		-30℃ ~ +80℃
Storage Temp. Range		-40℃ ~ +85℃
COIL INDUCTANCE		420uH ± 20(WITH KEY LOCK BODY)
COIL TURNS		95T

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3. SPECIFICATION

Type	Unit Ass'y Body Control
Name	Weak Signal Equip.
Equipment List	LF Transmitter-Receiver
Frequency	134.200KHz
Antenna Type	Type : BOBBIN COIL ANTENNA
Oscillation Method	Crystal oscillation
Local clock frequency	4MHz
Modulation Method	FSK
Communication Scheme	Two-Way Communication
Equipment use	Vehicle Antitheft Equip.
Operating Temp.	DC 13.5V (TMS3705 DC 5.0V)
Operating Voltage	-30℃ ~ +80℃
Weight	BCM : 580g, IMMO ANTENNA : 37g
Dimension	Antenna : External diameter 45mm

4. CIRCUIT EXPLANATION

1. After IGNITION, When EMS Data transmitted to the receiver, the received Data is analyzed.
2. After data analyzing, When EMS need to order Write key or Challenge service, U1 send data to U10
3. U10 what are transmitted data by U1 modulate FSK way, and then it transmit transponder via Antenna.
4. Transponder what receive data from U10 reply information what U10 is ordered after processing data
5. Data received from the transponder to reply with U1 and U10 after the demodulation. U1 verify data from U10, and then the results are sent back to EMS.

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FCC (Federal Communications Commission)

WARNING: This equipment may generate or use radio frequency energy.

Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual.

The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two

Conditions:

1. This device may not cause harmful interference, and
2. This device must accept ant interference received, including interference that may cause undesirable operation.

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