

# Unit Test Report

## for Electronic Door Lock System

- Test Cases Specification
- Test Summary Report

**Project Team**

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Latest update on:

**2013-12-12**

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## 1 Introduction

### 1.1 Objectives

본 문서는 Electronic Door Lock System.의 Unit Test를 수행하기 위한 계획 문서이며 다음과 같은 목적을 갖는다.

- (1) Electronic Door Lock System의 Unit Test를 수행하기 위해 필요한 활동 및 자원을 정의한다.
- (2) Electronic Door Lock System의 Unit Test를 수행하기 위한 test approach 및 techniques를 정의한다.
- (3) Electronic Door Lock System를 수행하기 위한 환경적인 요구사항 및 test 도구들을 정의한다.

### 1.2 References

- IEEE Std. 830-1998

## 2 Unit test case specification

### 2.1 Test case specification identifier

**<Table 1 : Test Case Identification>**

Identifier	Input specification	Output specification
EDLS.UTC_000_000	Returned == -1, InputData = {-1, -1, -1, -1, -1}, sq == -1, PowerStatus == false / sq == 0, Input = {0, 1, 2, 3, 4}	Returned == 0, InputData = {0, 1, 2, 3, 4}, sq = 0
EDLS.UTC_000_001	Returned == -1, InputData = {0, 1, 2, 3, 4}, sq == 0, PowerStatus == false / sq == 1	Returned == 1, sq == 1
EDLS.UTC_000_002	Returned == -1, InputData = {0, 1, 2, 3, 4}, sq == 1, PowerStatus == false / sq == 2	Returned == 2, sq == 2
EDLS.UTC_000_003	Returned == -1, InputData = {0, 1, 2, 3, 4}, sq == 2, PowerStatus == false / sq == 3	Returned == 3, sq == 3
EDLS.UTC_000_004	Returned == -1, InputData = {0, 1, 2, 3, 4}, sq == 3, PowerStatus == false	Returned == 4, sq == 4

	/ sq == 4	
EDLS.UTC_000_005	Returned == -1, InputData = {-1, -1, -1, -1, -1}, sq == 0, PowerStatus == false / sq == 0, Input = {0, 1, 2, 3, 4}	Returned == -1, InputData = {-1, -1, -1, -1, -1}
EDLS.UTC_000_006	Returned == -1, InputData = {0, 1, 2, 3, 4}, sq == 0, PowerStatus == false / sq == 0, Input = {0, 1, 2, 3, 4}	Returned == 0
EDLS.UTC_000_007	Returned == -1, sq == -1, PowerStatus == true / Input = {0, 1, 2, 3, 4}	Returned == 3
EDLS.UTC_001_000	Returned == -1 / Input == 0	Returned == 0
EDLS.UTC_001_001	Returned == -1 / Input == 1	Returned == 1
EDLS.UTC_001_002	Returned == -1 / Input == -1	Returned == -1
EDLS.UTC_001_003	Returned == -1 / Input == 2	Returned == -1
EDLS.UTC_001_004	Returned == -1 / Input == -3	Returned == -1
EDLS.UTC_002_000	Returned == -1 / Input == 1	Returned == 1
EDLS.UTC_002_001	Returned == -1 / Input == -1	Returned == -1
EDLS.UTC_002_002	Returned == -1 / Input == 3	Returned == -1
EDLS.UTC_002_003	Returned == -1 / Input == -5	Returned == -1
EDLS.UTC_003_000	Returned == -1 / Input == 1	Returned == 1
EDLS.UTC_003_001	Returned == -1 / Input == -1	Returned == -1
EDLS.UTC_003_002	Returned == -1 / Input == 6	Returned == -1
EDLS.UTC_003_003	Returned == -1 / Input == -2	Returned == -1
EDLS.UTC_004_000	Returned == -1, TimerPW == false / Input == 0	Returned == 0, TimerPW == true
EDLS.UTC_004_001	Returned == -1, TimerPW == false / Input == 5	Returned == 5, TimerPW == true
EDLS.UTC_004_002	Returned == -1, TimerPW == false / Input == 9	Returned == 9, TimerPW == true
EDLS.UTC_004_003	Returned == -1, TimerPW == false / Input == -1	Returned == -1, TimerPW == false
EDLS.UTC_004_004	Returned == -1, TimerPW == false / Input == -7	Returned == -1, TimerPW == false
EDLS.UTC_004_005	Returned == -1, TimerPW == false / Input == 13	Returned == -1, TimerPW == false
EDLS.UTC_005_000	Returned == -1 / Input == 0	Returned == 0
EDLS.UTC_005_001	Returned == -1 / Input == 1	Returned == 1
EDLS.UTC_005_002	Returned == -1 / Input == -1	Returned == -1

EDLS.UTC_005_003	Returned == -1 / Input == 8	Returned == -1
EDLS.UTC_005_004	Returned == -1 / Input == -12	Returned == -1
EDLS.UTC_006_000	Returned == -1, Activated == -1, TimerPW == false, Temp == {-1,-1,-1,-1} / Input == 5, AlarmPW == false	Returned == 1, Activated == -1, TimerPW == true, Temp == {5,-1,-1,-1}
EDLS.UTC_006_001	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,-1,-1,-1} / Input == 7, AlarmPW == false	Returned == 1, Activated == -1, TimerPW == true, Temp == {5,7,-1,-1}
EDLS.UTC_006_002	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1} / Input == -1, AlarmPW == false	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1}
EDLS.UTC_006_003	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1} / Input == 9, AlarmPW == true	Returned == 1, Activated == -1, TimerPW == true, Temp == {-1,-1,-1,-1}
EDLS.UTC_006_004	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1} / Input == -1, AlarmPW == true	Returned == -1, Activated == -1, TimerPW == false, Temp == {-1,-1,-1,-1}
EDLS.UTC_006_005	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,9,-1} / Input == 2, AlarmPW == false	Returned == 1, Activated == 1, TimerPW == true, Temp == {-1,-1,-1,-1}
EDLS.UTC_006_006	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,9,-1} / Input == 2, AlarmPW == true	Returned == 1, Activated == 1, TimerPW == true, Temp == {-1,-1,-1,-1}
EDLS.UTC_006_007	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1} / Input == -7, AlarmPW == false	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1}
EDLS.UTC_006_008	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1} / Input == 13, AlarmPW == false	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1}
EDLS.UTC_006_009	Returned == -1, Activated == -1, TimerPW == false, Temp == {5,7,-1,-1} / Input == 22, AlarmPW == true	Returned == -1, Activated == -1, TimerPW == false, Temp == {-1,-1,-1,-1}
EDLS.UTC_007_000	Returned == -1, TimerCS == false / Input == 1	Returned == 1, TimerCS == true
EDLS.UTC_007_001	Returned == -1, TimerCS == false / Input == -1	Returned == -1, TimerCS == false
EDLS.UTC_008_000	Returned == -1, TimerCS == true / Input == 1	Returned == 1, TimerCS == false

EDLS.UTC_008_001	Returned == -1, TimerCS == true / Input == -1	Returned == -1, TimerCS == true
EDLS.UTC_009_000	Returned == -1 / AlarmCS == true	Returned == 1
EDLS.UTC_009_001	Returned == -1 / AlarmCS == false	Returned == -1
EDLS.UTC_010_000	Returned == NULL, Temp == {-1,-1,-1,-1} / Input == 3, AlarmNB == false	Returned == NULL, Temp == {3, -1, -1, -1}
EDLS.UTC_010_001	Returned == NULL, Temp == {3,-1,-1,-1} / Input == 7, AlarmNB == false	Returned == NULL, Temp == {3, 7, -1, -1}
EDLS.UTC_010_002	Returned == NULL, Temp == {3, 7,-1,-1}/ Input == -1, AlarmNB == false	Returned == NULL, Temp = {3, 7, -1, -1}
EDLS.UTC_010_003	Returned == NULL, Temp == {3, 7,-1,-1} / Input == 8, AlarmNB == true	Returned == NULL, Temp = {-1, -1, -1, -1}
EDLS.UTC_010_004	Returned == NULL, Temp == {3, 7,-1,-1} / Input == -1, AlarmNB == true	Returned == NULL, Temp = {-1, -1, -1, -1}
EDLS.UTC_010_005	Returned == NULL, Temp == {3, 7, 8,-1} / Input == 2, AlarmNB == false	Returned == {3, 7, 8, 2}, Temp = {-1, -1, -1, -1}
EDLS.UTC_010_006	Returned == NULL, Temp == {3, 7, 8,-1} / Input == 2, AlarmNB == true	Returned == {3, 7, 8, 2}, Temp = {-1, -1, -1, -1}
EDLS.UTC_011_000	Returned == -1 / Input == 9	Returned == 1
EDLS.UTC_011_001	Returned == -1 / Input == -1	Returned == -1
EDLS.UTC_012_000	Returned == -1 / AlarmNB == true	Returned == 1
EDLS.UTC_012_001	Returned == -1 / AlarmNB == false	Returned == -1
EDLS.UTC_013_000	Returned == -1, Saved == {3,5,7,8} / Input == {3,5,7,8}	Returned == 1
EDLS.UTC_013_001	Returned == -1, Saved == {3,5,7,8} / Input == {4,2,1,8}	Returned == 2
EDLS.UTC_013_002	Returned == -1, Saved == {3,5,7,8} / Input == NULL	Returned == -1
EDLS.UTC_014_000	Returned == -1 / AlarmNB == true	Returned == 3
EDLS.UTC_014_001	Returned == -1 / AlarmNB == false	Returned == -1
EDLS.UTC_015_000	Returned == -1, TimerCvr == false / Input == 1	Returned == 1, TimerCvr == true
EDLS.UTC_015_001	Returned == -1, TimerCvr == false / Input == -1	Returned == -1, TimerCvr == false
EDLS.UTC_016_000	Returned == -1 / Input == 1, AlarmCvr == true	Returned == 1
EDLS.UTC_016_001	Returned == -1 / Input == -1, AlarmCvr == true	Returned == 1

EDLS.UTC_016_002	Returned == -1 / Input == 1, AlarmCvr == false	Returned == 1
EDLS.UTC_016_003	Returned == -1 / Input == -1, AlarmCvr == false	Returned == -1
EDLS.UTC_017_000	Saved == {-1,-1,-1,-1}, PowerStatus == true / Input == {3,5,7,8}	Saved == {3,5,7,8}, PowerStatus == false
EDLS.UTC_017_001	Saved == {-1,-1,-1,-1}, PowerStatus == true / Input == NULL	Saved == {-1,-1,-1,-1}, PowerStatus == true
EDLS.UTC_018_000	Returned == -1 / AlarmPW == true	Returned == 3
EDLS.UTC_018_001	Returned == -1 / AlarmPW == false	Returned == -1
EDLS.UTC_019_000	Returned == -1 / Input == 1	Returned == 1
EDLS.UTC_019_001	Returned == -1 / Input == -1	Returned == -1
EDLS.UTC_020_000	Returned == -1 / AlarmPW == true	Returned == 1
EDLS.UTC_020_001	Returned == -1 / AlarmPW == true	Returned == -1
EDLS.UTC_021_000	Returned == -1 / Lock == 1, Unlock == 1	Returned == 1
EDLS.UTC_021_001	Returned == -1 / Lock == 1, Unlock == -1	Returned == 1
EDLS.UTC_021_002	Returned == -1 / Lock == -1, Unlock == 1	Returned == 0
EDLS.UTC_021_003	Returned == -1 / Lock == -1, Unlock == -1	Returned == -1
EDLS.UTC_022_000	Returned == -1 / Input == 1	Returned == 1
EDLS.UTC_022_001	Returned == -1 / Input == 2	Returned == 2
EDLS.UTC_022_002	Returned == -1 / Input == 3	Returned == 3
EDLS.UTC_022_003	Returned == -1 / Input == -1	Returned == -1
EDLS.UTC_023_000	Returned == -1 / On == 1, Off == 1	Returned == 1

EDLS.UTC_023_001	Returned == -1 / On == 1, Off == -1	Returned == 1
EDLS.UTC_023_002	Returned == -1 / On == -1, Off == 1	Returned == 0
EDLS.UTC_023_003	Returned == -1 / On == -1, Off == -1	Returned == -1
EDLS.UTC_024_000	Triggered == -1 / Input == 0	Triggered == 0
EDLS.UTC_024_001	Triggered == -1 / Input == 1	Triggered == 1
EDLS.UTC_024_002	Triggered == -1 / Input == -1	Triggered == -1
EDLS.UTC_025_000	Triggered == -1 / Input == 1	Triggered == 1
EDLS.UTC_025_001	Triggered == -1 / Input == 2	Triggered == 2
EDLS.UTC_025_002	Triggered == -1 / Input == 3	Triggered == 3
EDLS.UTC_025_003	Triggered == -1 / Input == -1	Triggered == -1
EDLS.UTC_026_000	Triggered == -1, sq == 4 / Input == 0	Triggered == 0, sq == -1
EDLS.UTC_026_001	Triggered == -1, sq == 4 / Input == 1	Triggered == 1, sq == -1
EDLS.UTC_026_002	Triggered == -1, sq == 4 / Input == -1	Triggered == -1, sq == 4

'1'은 참, '0'은 거짓, '-1'은 무

## 2.2 Test items

### <Test 2 : Test Design Identification>

Identifier	Feature (Process ID in DFD)	Valid/ <b>Invalid</b> value
EDLS.UTC_000_000	4.1 InputFilter	암호설정함, InputData = {-1, -1, -1, -1, -1}, sq == -1, PowerStatus == false 상태, sq == 0, Input = {0, 1, 2, 3, 4} 입력
EDLS.UTC_000_001	4.1 InputFilter	암호설정함, InputData = {0, 1, 2, 3, 4}, sq == 0, PowerStatus == false 상태, sq == 1 입력
EDLS.UTC_000_002	4.1 InputFilter	암호설정함, InputData = {0, 1, 2, 3, 4}, sq == 1, PowerStatus == false 상태, sq == 2 입력
EDLS.UTC_000_003	4.1 InputFilter	암호설정함, InputData = {0, 1, 2, 3, 4}, sq == 2, PowerStatus == false 상태, sq == 3 입력
EDLS.UTC_000_004	4.1 InputFilter	암호설정함, InputData = {0, 1, 2, 3, 4}, sq == 3, PowerStatus == false 상태, sq == 4 입력
EDLS.UTC_000_005	4.1 InputFilter	암호설정함, InputData = {-1, -1, -1, -1, -1}, sq == 0, PowerStatus == false 상태, sq == 0,



		Input = {0, 1, 2, 3, 4} 입력
EDLS.UTC_000_006	4.1 InputFilter	암호설정함, InputData = {0, 1, 2, 3, 4}, sq == 0, PowerStatus == false 상태, sq == 0, Input = {0, 1, 2, 3, 4} 입력
EDLS.UTC_000_007	4.1 InputFilter	암호설정안함, sq == -1, PowerStatus == true 상태, Input = {0, 1, 2, 3, 4} 입력
EDLS.UTC_001_000	1.1.1 ClosedSensorReceiver	[0]입력이 들어옴
EDLS.UTC_001_001	1.1.1 ClosedSensorReceiver	[1]입력이 들어옴
EDLS.UTC_001_002	1.1.1 ClosedSensorReceiver	[-1]입력이 들어옴
EDLS.UTC_001_003	1.1.1 ClosedSensorReceiver	[2]입력이 들어옴
EDLS.UTC_001_004	1.1.1 ClosedSensorReceiver	[-3]입력이 들어옴
EDLS.UTC_002_000	1.2 ManualLockReceiver	[1]입력이 들어옴
EDLS.UTC_002_001	1.2 ManualLockReceiver	[-1]입력이 들어옴
EDLS.UTC_002_002	1.2 ManualLockReceiver	[3]입력이 들어옴
EDLS.UTC_002_003	1.2 ManualLockReceiver	[-5]입력이 들어옴
EDLS.UTC_003_000	1.3 KeyReceiver	[1]입력이 들어옴
EDLS.UTC_003_001	1.3 KeyReceiver	[-1]입력이 들어옴
EDLS.UTC_003_002	1.3 KeyReceiver	[6]입력이 들어옴
EDLS.UTC_003_003	1.3 KeyReceiver	[-2]입력이 들어옴
EDLS.UTC_004_000	1.4.1 NumberButtonReceiver	[0]입력이 들어옴
EDLS.UTC_004_001	1.4.1 NumberButtonReceiver	[5]입력이 들어옴
EDLS.UTC_004_002	1.4.1 NumberButtonReceiver	[9]입력이 들어옴
EDLS.UTC_004_003	1.4.1 NumberButtonReceiver	[-1]입력이 들어옴
EDLS.UTC_004_004	1.4.1 NumberButtonReceiver	[-7]입력이 들어옴
EDLS.UTC_004_005	1.4.1 NumberButtonReceiver	[13]입력이 들어옴
EDLS.UTC_005_000	1.5.1 CoverReceiver	[0]입력이 들어옴
EDLS.UTC_005_001	1.5.1 CoverReceiver	[1]입력이 들어옴
EDLS.UTC_005_002	1.5.1 CoverReceiver	[-1]입력이 들어옴
EDLS.UTC_005_003	1.5.1 CoverReceiver	[8]입력이 들어옴
EDLS.UTC_005_004	1.5.1 CoverReceiver	[-12]입력이 들어옴
EDLS.UTC_006_000	4.2 PasswordSetup	Temp == {-1,-1,-1,-1}상태, AlarmPW == false, [5]입력이 들어옴
EDLS.UTC_006_001	4.2 PasswordSetup	Temp == {5,-1,-1,-1}상태, AlarmPW == false, [7]입력이 들어옴
EDLS.UTC_006_002	4.2 PasswordSetup	Temp == {5,7,-1,-1}상태, AlarmPW == false, [-1]입력이 들어옴
EDLS.UTC_006_003	4.2 PasswordSetup	Temp == {5,7,-1,-1}상태, AlarmPW == true, [9]입력이 들어옴

EDLS.UTC_006_004	4.2 PasswordSetup	Temp == {5,7,-1,-1}상태, AlarmPW == true, [-1]입력이 들어옴
EDLS.UTC_006_005	4.2 PasswordSetup	Temp == {5,7,9,-1}상태, AlarmPW == false, [2]입력이 들어옴
EDLS.UTC_006_006	4.2 PasswordSetup	Temp == {5,7,9,-1}상태, AlarmPW == true, [2]입력이 들어옴
EDLS.UTC_006_007	4.2 PasswordSetup	Temp == {5,7,-1,-1}상태, AlarmPW == false, [-7]입력이 들어옴
EDLS.UTC_006_008	4.2 PasswordSetup	Temp == {5,7,-1,-1}상태, AlarmPW == false, [13]입력이 들어옴
EDLS.UTC_006_009	4.2 PasswordSetup	Temp == {5,7,-1,-1}상태, AlarmPW == true, [22]입력이 들어옴
EDLS.UTC_007_000	1.1.2 ClosedSensorClosed	[1]입력이 들어옴
EDLS.UTC_007_001	1.1.2 ClosedSensorClosed	[-1]입력이 들어옴
EDLS.UTC_008_000	1.1.3 ClosedSensorOpened	[1]입력이 들어옴
EDLS.UTC_008_001	1.1.3 ClosedSensorOpened	[-1]입력이 들어옴
EDLS.UTC_009_000	1.1.4 ClosedSensorLock	[true]입력이 들어옴
EDLS.UTC_009_001	1.1.4 ClosedSensorLock	[false]입력이 들어옴
EDLS.UTC_010_000	1.4.2 NumberRecord	Temp == {-1,-1,-1,-1}상태, AlarmNB == false, [3]입력이 들어옴
EDLS.UTC_010_001	1.4.2 NumberRecord	Temp == {3,-1,-1,-1}상태, AlarmNB == false, [7]입력이 들어옴
EDLS.UTC_010_002	1.4.2 NumberRecord	Temp == {3, 7,-1,-1}상태, AlarmNB == false, [-1]입력이 들어옴
EDLS.UTC_010_003	1.4.2 NumberRecord	Temp == {3, 7,-1,-1}상태, AlarmNB == true, [8]입력이 들어옴
EDLS.UTC_010_004	1.4.2 NumberRecord	Temp == {3, 7,-1,-1}상태, AlarmNB == true, [-1]입력이 들어옴
EDLS.UTC_010_005	1.4.2 NumberRecord	Temp == {3, 7, 8,-1}상태, AlarmNB == false, [2]입력이 들어옴
EDLS.UTC_010_006	1.4.2 NumberRecord	Temp == {3, 7, 8,-1}상태, AlarmNB == true, [2]입력이 들어옴
EDLS.UTC_011_000	1.4.3 BacklightOn	[9]입력이 들어옴
EDLS.UTC_011_001	1.4.3 BacklightOn	[-1]입력이 들어옴
EDLS.UTC_012_000	1.4.4 BacklightOff	[true]입력이 들어옴
EDLS.UTC_012_001	1.4.4 BacklightOff	[false]입력이 들어옴
EDLS.UTC_013_000	1.4.5 NumberCheck	Saved == {3,5,7,8}상태, Input == {3,5,7,8}입력
EDLS.UTC_013_001	1.4.5 NumberCheck	Saved == {3,5,7,8}상태, Input == {4,2,1,8}입력

EDLS.UTC_013_002	1.4.5 NumberCheck	Saved == {3,5,7,8}상태, Input == NULL입력
EDLS.UTC_014_000	1.4.6 NumberTimeover	[true]입력이 들어옴
EDLS.UTC_014_001	1.4.6 NumberTimeover	[false]입력이 들어옴
EDLS.UTC_015_000	1.5.2 LightOn	[1]입력이 들어옴
EDLS.UTC_015_001	1.5.2 LightOn	[-1]입력이 들어옴
EDLS.UTC_016_000	1.5.3 LightOff	Alarm(Cvr) == true, [1]입력이 들어옴
EDLS.UTC_016_001	1.5.3 LightOff	Alarm(Cvr) == true, [-1]입력이 들어옴
EDLS.UTC_016_002	1.5.3 LightOff	Alarm(Cvr) == false, [1]입력이 들어옴
EDLS.UTC_016_003	1.5.3 LightOff	Alarm(Cvr) == false, [-1]입력이 들어옴
EDLS.UTC_017_000	4.3 PasswordSave	Input == {3,5,7,8}입력
EDLS.UTC_017_001	4.3 PasswordSave	Input == NULL입력
EDLS.UTC_018_000	4.4 PasswordTimeover	[true]입력이 들어옴
EDLS.UTC_018_001	4.4 PasswordTimeover	[false]입력이 들어옴
EDLS.UTC_019_000	4.5 BacklightOn(PW)	[1]입력이 들어옴
EDLS.UTC_019_001	4.5 BacklightOn(PW)	[-1]입력이 들어옴
EDLS.UTC_020_000	4.6 BacklightOff(PW)	[true]입력이 들어옴
EDLS.UTC_020_001	4.6 BacklightOff(PW)	[false]입력이 들어옴
EDLS.UTC_021_000	1.6 DetermineLock/Unlock	Lock == 1, Unlock == 1입력이 들어옴
EDLS.UTC_021_001	1.6 DetermineLock/Unlock	Lock == 1, Unlock == -1입력이 들어옴
EDLS.UTC_021_002	1.6 DetermineLock/Unlock	Lock == -1, Unlock == 1입력이 들어옴
EDLS.UTC_021_003	1.6 DetermineLock/Unlock	Lock == -1, Unlock == -1입력이 들어옴
EDLS.UTC_022_000	1.7 DetermineAlert	[1]입력이 들어옴
EDLS.UTC_022_001	1.7 DetermineAlert	[2]입력이 들어옴
EDLS.UTC_022_002	1.7 DetermineAlert	[3]입력이 들어옴
EDLS.UTC_022_003	1.7 DetermineAlert	[-1]입력이 들어옴
EDLS.UTC_023_000	1.8 DetermineBacklight	On == 1, Off == 1입력이 들어옴
EDLS.UTC_023_001	1.8 DetermineBacklight	On == 1, Off == -1입력이 들어옴
EDLS.UTC_023_002	1.8 DetermineBacklight	On == -1, Off == 1입력이 들어옴
EDLS.UTC_023_003	1.8 DetermineBacklight	On == -1, Off == -1 입력이 들어옴
EDLS.UTC_024_000	2.1 Lock/UnlockControl	[0]입력이 들어옴
EDLS.UTC_024_001	2.1 Lock/UnlockControl	[1]입력이 들어옴
EDLS.UTC_024_002	2.1 Lock/UnlockControl	[-1]입력이 들어옴
EDLS.UTC_025_000	3.1 AlertControl	[1]입력이 들어옴
EDLS.UTC_025_001	3.1 AlertControl	[2]입력이 들어옴
EDLS.UTC_025_002	3.1 AlertControl	[3]입력이 들어옴
EDLS.UTC_025_003	3.1 AlertControl	[-1]입력이 들어옴
EDLS.UTC_026_000	3.2 BacklightControl	sq == 4 상태, [0]입력이 들어옴
EDLS.UTC_026_001	3.2 BacklightControl	sq == 4 상태, [1]입력이 들어옴

EDLS.UTC_026_002	3.2 BacklightControl	sq == 4 상태, [-1]입력이 들어옴
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### 2.3 Input specifications

<Table 1 : Test Case Identification> 참조

### 2.4 Output specifications

<Table 1 : Test Case Identification> 참조

## 3 Environmental needs

- Electronic Door Lock System의 Unit Test를 위한 환경적 요구사항은 다음과 같다.

- (1) Hardware & Platform, Visual Studio 2012(IDE)
- (2) CTIP(Continuous Testing & Integration Platform) Environment

Test tools

e-mail

e-mail에 접근 가능한 PC 또는 SmartPhone

## 4 Unit test summary report

### 4.1 Test summary report identifier

<Figure1. Result of Unit Test(1)>

<Figure2. Result of Unit Test(2)>

<Figure3. Result of Unit Test(3)>

<Figure4. Result of Unit Test(4)> 참조

### 4.2 Evaluation

리턴값이나 트리거된 함수의 동작여부를 판단하기 위해 해당 값을 매개변수를 통하여 알아볼 수 있도록 코드를 수정함. 프로세스 NumberCheck(1.4.5)과 NumberButtonReceiver(1.4.1)에 대해서 두 번 호출하는 문제를 회피하기 위해 사용한 코드가 있는데 그 코드는 전체 시스템적인 문제이고 그 유닛에 관한 문제라고 볼 수 없기 때문에 테스트에서 제외함.

```
EDLS.UTC.000.000 : Pass
EDLS.UTC.000.001 : Pass
EDLS.UTC.000.002 : Pass
EDLS.UTC.000.003 : Pass
EDLS.UTC.000.004 : Pass
EDLS.UTC.000.005 : Pass
EDLS.UTC.000.006 : Pass
EDLS.UTC.000.007 : Pass

EDLS.UTC.001.000 : Pass
EDLS.UTC.001.001 : Pass
EDLS.UTC.001.002 : Pass
EDLS.UTC.001.003 : Pass
EDLS.UTC.001.004 : Pass

EDLS.UTC.002.000 : Pass
EDLS.UTC.002.001 : Pass
EDLS.UTC.002.002 : Pass
EDLS.UTC.002.003 : Pass

EDLS.UTC.003.000 : Pass
EDLS.UTC.003.001 : Pass
EDLS.UTC.003.002 : Pass
EDLS.UTC.003.003 : Pass

EDLS.UTC.004.000 : Pass
EDLS.UTC.004.001 : Pass
EDLS.UTC.004.002 : Pass
EDLS.UTC.004.003 : Pass
EDLS.UTC.004.004 : Pass
EDLS.UTC.004.005 : Pass
```

<Figure1. Result of Unit Test(1)>

```
EDLS.UTC.005.000 : Pass
EDLS.UTC.005.001 : Pass
EDLS.UTC.005.002 : Pass
EDLS.UTC.005.003 : Pass
EDLS.UTC.005.004 : Pass

EDLS.UTC.006.001 : Pass
EDLS.UTC.006.002 : Pass
EDLS.UTC.006.003 : Pass
EDLS.UTC.006.004 : Pass
EDLS.UTC.006.005 : Pass
EDLS.UTC.006.006 : Pass
EDLS.UTC.006.007 : Pass
EDLS.UTC.006.008 : Pass
EDLS.UTC.006.009 : Pass

EDLS.UTC.007.000 : Pass
EDLS.UTC.007.001 : Pass

EDLS.UTC.008.000 : Pass
EDLS.UTC.008.001 : Pass

EDLS.UTC.010.000 : Pass
EDLS.UTC.010.001 : Pass
EDLS.UTC.010.002 : Pass
EDLS.UTC.010.003 : Pass
EDLS.UTC.010.004 : Pass
EDLS.UTC.010.005 : Pass
EDLS.UTC.010.006 : Pass
```

<Figure2. Result of Unit Test(2)>

```
EDLS.UTC.011.000 : Pass
EDLS.UTC.011.001 : Pass

EDLS.UTC.012.000 : Pass
EDLS.UTC.012.001 : Pass

EDLS.UTC.013.000 : Pass
EDLS.UTC.013.001 : Pass
EDLS.UTC.013.002 : Pass

EDLS.UTC.014.000 : Pass
EDLS.UTC.014.001 : Pass

EDLS.UTC.015.000 : Pass
EDLS.UTC.015.001 : Pass

EDLS.UTC.016.000 : Pass
EDLS.UTC.016.001 : Pass
EDLS.UTC.016.002 : Pass
EDLS.UTC.016.003 : Pass

EDLS.UTC.017.000 : Pass
EDLS.UTC.017.001 : Pass

EDLS.UTC.018.000 : Pass
EDLS.UTC.018.001 : Pass
EDLS.UTC.018.002 : Pass
EDLS.UTC.018.003 : Pass

EDLS.UTC.019.000 : Pass
EDLS.UTC.019.001 : Pass
EDLS.UTC.019.002 : Pass
EDLS.UTC.019.003 : Pass
```

<Figure3. Result of Unit Test(3)>

```
EDLS.UTC.020.000 : Pass
EDLS.UTC.020.001 : Pass
EDLS.UTC.020.002 : Pass
EDLS.UTC.020.003 : Pass

EDLS.UTC.021.000 : Pass
EDLS.UTC.021.001 : Pass
EDLS.UTC.021.002 : Pass
EDLS.UTC.021.003 : Pass

EDLS.UTC.022.000 : Pass
EDLS.UTC.022.001 : Pass
EDLS.UTC.022.002 : Pass
EDLS.UTC.022.003 : Pass

EDLS.UTC.023.000 : Pass
EDLS.UTC.023.001 : Pass
EDLS.UTC.023.002 : Pass
EDLS.UTC.023.003 : Pass

EDLS.UTC.024.000 : Pass
EDLS.UTC.024.001 : Pass
EDLS.UTC.024.002 : Pass

EDLS.UTC.025.000 : Pass
EDLS.UTC.025.001 : Pass
EDLS.UTC.025.002 : Pass
EDLS.UTC.025.003 : Pass

EDLS.UTC.026.000 : Pass
EDLS.UTC.026.001 : Pass
EDLS.UTC.026.002 : Pass
```

<Figure4. Result of Unit Test(4)>