



ATSUMI ELECTRIC CO., LTD.

Smart Lock

ZSL10

Instruction Manual

<Introduction>

This document describes the Smart Lock overview and how to use the Z-Wave™ functionality.

This product "ZSL10" can remotely lock and unlock the door and check the status by remote control.

This device is a security enabled Z-Wave Plus™ product that is able to use encrypted Z-Wave Plus™ messages to communicate to other security enabled Z-Wave Plus™ products.

This device must be used in conjunction with a S2 Security Enabled Z-Wave™ Controller in order to fully utilize all implemented functions.

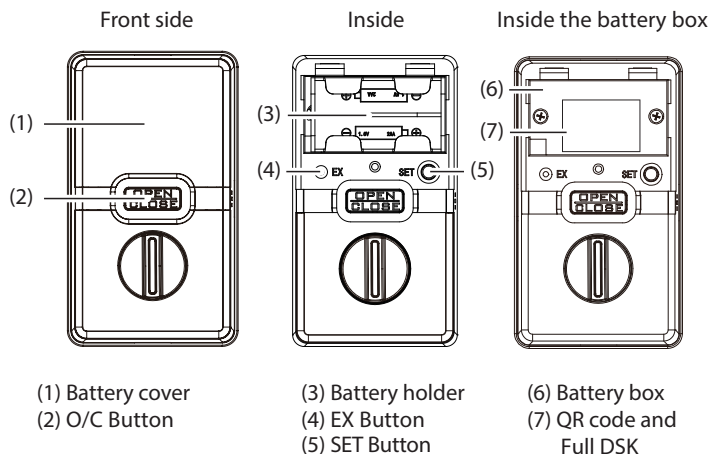
This product can be operated in any Z-Wave™ network with other Z-Wave™ certified devices from other manufacturers. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

SmartStart enabled products can be added into a Z-Wave™ network by scanning the Z-Wave™ QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

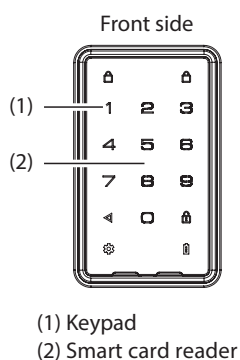
QR code and Full DSK is located inside the battery box of IN BODY and on the packing box.

Part Names

IN - BODY



OUT - BODY

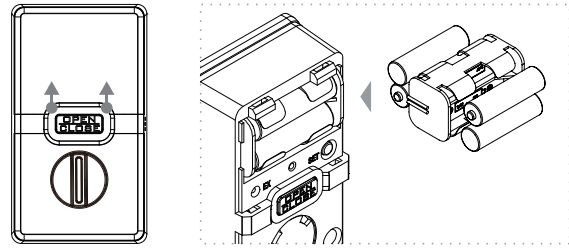


Operation

1. Insert batteries

Remove the battery cover of INBODY.

Install AA batteries in the battery case. 4*AA(Alkaline or lithium)
Wait for a while, a beep will sound and the o/c button will blink blue.
When the blinking goes off, the startup is complete.



2-1. Add (Inclusion) - SmartStart

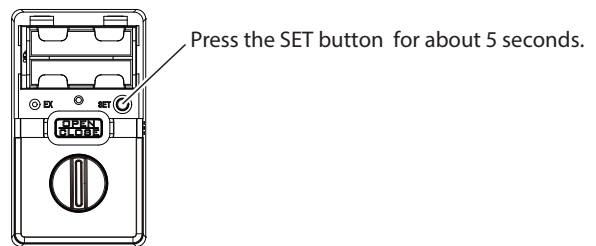
Add the smart lock DSK into the primary controller SmartStart Provisioning List.

(If your controller does not support SmartStart inclusion, please refer to the manual for your controller for non-SmartStart inclusion.)

2-2. Add - Normal Inclusion

Set the controller in "Add(Inclusion)" mode.

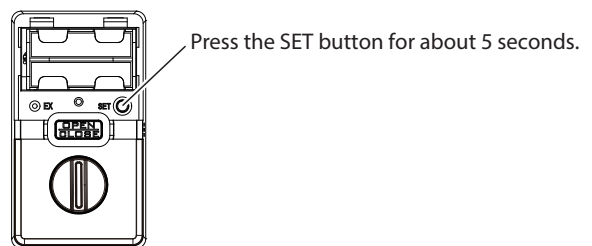
For the operation procedure, see the instruction manual of the controller. Press the SET button for about 5 seconds to start the registration operation and the O / C button will blink blue and beeps twice. Inclusion takes about 1 minute. Please confirm the inclusion is complete. After that, it flashes red, but this is not related to the success / failure of inclusion.



3. Remove (Exclusion)

Set the controller in "Remove(Exclusion)" mode.

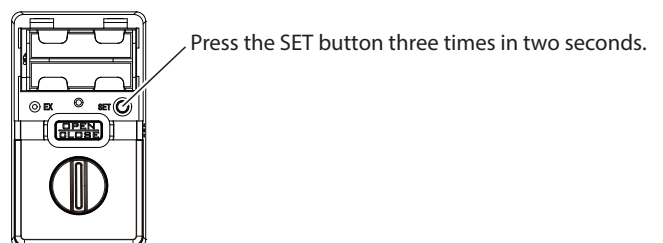
For the operation procedure, see the instruction manual of the controller. Press the SET button for about 5 seconds to start the registration operation and the O / C button will blink blue and beeps twice. Please confirm the inclusion is complete. After that, it flashes red, but this is not related to the success / failure of inclusion.



4. Factory Default Reset

[NOTE]

Use this procedure only in the event that the primary controller is lost. The controller information are cleared. The lock settings and user information do not change. Press the SET button three times in two seconds to start the reset operation and the O/C button will blink red and beeps.



Command Class

Battery (0x80)

The device sends the battery capacity in %.

It Sends "0xFF" when the voltage goes below the threshold.

Basic (0x20)

Basic CC is maps to Door Lock CC.

0x00 : Door Unsecured

0xFF : Door Secured

Association (0x85)

The number of supported groups is 1. "Lifeline"

The number of supportable nodes is 1 unit.

User Code (0x63)

This command allows user registration and deletion, and user information acquisition.

PIN code that duplicates another user cannot be used.

Registration , PIN code change (0x01)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_USER_CODE							
Command = USER_CODE_SET							
User Identifier							
User ID Status							
User Code 1							
...							
User Code N							

User Identifier

0x01~0x63

User ID Status

0x01

User Code

1~9(UTF-8) N:4~8

Deletion (0x01)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_USER_CODE							
Command = USER_CODE_SET							
User Identifier							
User ID Status							

User Identifier

0x01~0x63

User ID Status

0x00

Get user ID list (0x0C)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_USER_CODE							
Command = EXTENDED_USER_CODE_GET							
User Identifier 1 (MSB)							
User Identifier 2 (LSB)							
Reserved							Report more

User Identifier 1 (MSB)

0x00

User Identifier 1 (LSB)

0x01~0x63

Report more

0:Only User Identifier

1:All after User Identifier

Response (0x0D)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_USER_CODE							
Command = EXTENDED_USER_CODE_REPORT							
Number of User Codes							
User Identifier 1 (MSB) 1							
User Identifier 2 (LSB) 1							
User ID Status 1							
Reserved							User Code Length 1
User Code 1, 1							
...							
User Code N, 1							
...							
User Identifier 1 (MSB) M							
User Identifier 2 (LSB) M							
User ID Status M							
Reserved							User Code Length M
User Code 1, M							
...							
User Code N, M							
Next User Identifier 1 (MSB)							
Next User Identifier 2 (LSB)							

Number of User Codes

Number of response

User Identifier N (MSB)

0x01

User Identifier N (LSB)

0x01~0x63

User ID Status

0x00:User ID does not exist

0x01:User ID exists

0xFE:No users

User Code Length

4~8:PIN Code Length

User Code

1~9(UTF-8) N:4~8

Next User Identifier

0x00:End of response

0x01~0x63:Next User ID

Get user PIN Code (0x02)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_USER_CODE							
Command = USER_CODE_GET							
User Identifier							

User Identifier

0x01~0x63

Response (0x03)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_USER_CODE							
Command = USER_CODE_REPORT							
User Identifier							
User ID Status							
User Code 1							
...							
User Code N							

User Identifier

0x01~0x63

User ID Status

0x00:User ID does not exist

0x01:User ID exists

0xFE:Master ID does

not exist

User Code

1~9(UTF-8) N:4~8

0x00:If User ID Status is

"0x00" or "0xFE"

Door Lock Logging (0x4C)

Get event type (0x03)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_DOOR_LOCK_LOGGING							
Command = RECORD_GET							
Record number							

Record number

0x00~0x06

The record number log once got will be deleted. To get the log for the next queue, get the log for all record numbers.

Response (0x04)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_DOOR_LOCK_LOGGING							
Command = RECORD_REPORT							
Record number							
Timestamp - Year 1 (MSB)							
Timestamp - Year 2 (LSB)							
Timestamp - Month							
Timestamp - Day							
Record status							
Timestamp - Hour Local Time							
Timestamp - Minute Local Time							
Timestamp - Second Local Time							
Event Type							
User Identifier							
User Code Length							

Record number

0x01~0x06

Timestamp - Year 1 (MSB)

Timestamp - Year 2 (LSB)

Timestamp - Month

Timestamp - Day

Record status

0x01

Timestamp - Hour Local Time

Timestamp - Minute Local Time

Timestamp - Second Local Time

Event Type (See Table 1)

User Identifier

0x00~0x63

User Code Length

0x00

Table 1. Event Type

Value	Event type
0x01	Lock Command: Keypad access code verified lock command
0x02	Unlock Command: Keypad access code verified unlock command
0x03	Lock Command: Keypad lock button pressed
0x04	Unlock command: Keypad unlock button pressed
0x07	Keypad illegal access code entered
0x08	Key or latch operation locked (manual)
0x09	Key or latch operation unlocked (manual)
0x0A	Auto lock operation
0x0B	Auto unlock operation
0x0E	Lock Command: Z-Wave (no code)
0x0F	Unlock Command: Z-Wave (no code)
0x17	User code added
0x18	User code deleted
0x1B	User code changed
0x1C	Lock reset
0x1E	Low battery

Door Lock (0x62)

Get Lock state (0x02)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_DOOR_LOCK							
Command = DOOR_LOCK_OPERATION_GET							

Response (0x03)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_DOOR_LOCK							
Command = DOOR_LOCK_OPERATION_REPORT							
Door Lock Mode							
Outside Door Handles Mode				Inside Door Handles Mode			
Door Condition							
Lock Timeout Minutes							
Lock Timeout Seconds							
Target Door Lock Mode							
Duration							

Door Lock Mode

0x00 : Door Unsecured

0xFF : Door Secured

Outside Door Handles Mode

0x00

Inside Door Handles Mode

0x00

Door Condition

0x00

0x01

0x02

0x03

secured

secured

unsecured

unsecured

secured

Lock Timeout Minutes

0x00

Lock Timeout Seconds

0x00

Target Door Lock Mode

0x00

Duration

0x00

Remote control (0x01)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_DOOR_LOCK							
Command = DOOR_LOCK_OPERATION_SET							
Door Lock Mode							

Door Lock Mode
0x00 : Door Unsecured
0xFF : Door Secured

Response (0x03)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_DOOR_LOCK							
Command = DOOR_LOCK_OPERATION_REPORT							
Door Lock Mode							
Outside Door Handles Mode				Inside Door Handles Mode			
Door Condition							
Lock Timeout Minutes							
Lock Timeout Seconds							
Target Door Lock Mode							
Duration							

Door Lock Mode
0x00 : Door Unsecured
0xFF : Door Secured
Outside Door Handles Mode
0x00
Inside Door Handles Mode
0x00
Door Condition
0x00
Lock Timeout Minutes
0x00
Lock Timeout Seconds
0x00
Target Door Lock Mode
0x00
Duration
0x00

Indicator (0x87)

When you send this command, it beeps once and the button flashes blue about 2 second.

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_INDICATOR							
Command = INDICATOR_SET							
Value							

Value 0xFF

Firmware-Update over the Air (0x7A)

This device is capable of receiving a new firmware 'over the air'.

Target 0 : Z-Wave
Target 1 : INBODY
Target 2 : OUTBODY

Configuration

Configuration Parameters

Parameter No.13

Change the device time setting.

Default : 0 [NOTE]If Default is set to 1, the following items will ignore the set values and return to the defaults.

Size : 4

Configuration_Set(0x04)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_SET							
Parameter Number							
Default	Reserved				Size		
Device time(MSB)							
...							
...							
Device time(LSB)							

Default
0x38
0x6D
0x43
0x80

Configurable time 2000/01/01 00:00:00 ~ 2099/12/31 23:59:59

[NOTE] It cannot be set at any other time.

Configuration_Report(0x06)

The format after the parameter number is the same as SET.

Parameter No.14

Change the lock settings.

Default : 0 [NOTE]If Default is set to 1, the following items will ignore the set values and return to the defaults.

Size : 2

Configuration_Set(0x04)

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_SET							
Parameter Number							
Default	Reserved				Size		
Setting the hanging	Volume		Lock mode		O/C button	Main/sub switching for double lock	0
Door sensor	Lock mode when unlocking thumb turn		Motor torque	0	0	0	0

Configuration_Report(0x06)

The format after the parameter number is the same as SET.

Pn14 Setting details

Setting name	Value	Detail	Default
Setting the hanging	0	left hanging door	
	1	right hanging door	○
Volume	00	mute	
	01	small	
	10	medium	○
	11	large	
Lock mode	00	automatic locking - short	○
	01	automatic locking - long	
	10	manual	
	11	manual *1	
O/C button	0	disable	
	1	enabled	○
Main/sub switching for double lock	0	main	○
	1	sub *2,*3	
Door sensor	00	disable	
	01	enabled	○
	10	enabled *4	
	11	Not used	
Lock mode when unlocking thumb turn	0	Continuous-unlocking	○
	1	automatic locking *5	
Motor torque	0	normal	○
	1	high	

*1 When locking with OUTBODY, operation with PIN code or IC card is required.

*2 The lock mode changes to manual (0x02).

*3 The door sensor changes to disable (0x00).

*4 No alarm when the door is forced open.

*5 If the lock mode is manual, it cannot be set to (0x01).

Z-Wave Command Classes

COMMAND_CLASS_ZWAVEPLUS_INFO_V2
COMMAND_CLASS_TRANSPORT_SERVICE_V2
COMMAND_CLASS_SECURITY
COMMAND_CLASS_SECURITY_2
COMMAND_CLASS_SUPERVISION

COMMAND_CLASS_ASSOCIATION_V2(On Secure)
COMMAND_CLASS_ASSOCIATION_GRP_INFO_V3(On Secure)
COMMAND_CLASS_BASIC_V2(On Secure)
COMMAND_CLASS_BATTERY(On Secure)
COMMAND_CLASS_CONFIGURATION(On Secure)
COMMAND_CLASS_DEVICE_RESET_LOCALLY(On Secure)
COMMAND_CLASS_DOOR_LOCK_V4(On Secure)
COMMAND_CLASS_DOOR_LOCK_LOGGING(On Secure)
COMMAND_CLASS_FIRMWARE_UPDATE_MD_V5(On Secure)
COMMAND_CLASS_INDICATOR_V3(On Secure)
COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2(On Secure)
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3(On Secure)
COMMAND_CLASS_POWERLEVEL(On Secure)
COMMAND_CLASS_USER_CODE(On Secure)
COMMAND_CLASS_VERSION_V3(On Secure)

Specifications

Product name	Smart Lock
Part number	ZSL10
Power supply	AA type x 4
Indicating light	Red and blue (IN - BODY) White , red , green (OUT - BODY)
Operating temperature	For alkaline batteries 0 to +50 °C For lithium batteries -20 to +50 °C
Operating humidity	RH 20 to 85% (no condensation)
Communication mode	Z-Wave®
Available frequency	922.5 / 923.9 / 926.3 MHz
Communication distance	About 30 m (prospect)
Outside dimensions	
IN - BODY	About 74.8(W) x 129.3(H) x 54.5(D) mm
OUT - BODY	About 56.9(W) x 93.4(H) x 17.98(D) mm
Mass	About 800 g