

GKDL-5000Z, GKDL-5100Z

Smart Door Lock

Z-Wave Specification

Manual

Ver 1.0

This product is a secure electronic door lock that supports the Z-Wave Plus™ standard, which is compatible with earlier versions of Z-Wave™.

This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

The device can be included in the Z-Wave network using S0 or S2 Access Control security. Inclusion can be via standard inclusion, SmartStart:

Z-Wave Specifications

- Device Type : Door Lock (SPECIFIC_TYPE_ DOOR_LOCK)
- Role Type : LSS (Listening Sleeping Slave)
- Command Cass Support/Control

Standard Network Inclusion / Exclusion

Please proceed with the door lock open.

- To add or include this product into a Z-Wave network
 1. Set the controller in inclusion mode.
 2. Open the battery cover of the indoor body and press the [REG] button.
 3. Press the Master Pin [1][2][3][4] (Default value) button after pressing the [#] button.
 4. Press the [8][8] button after pressing the [#] button.
 5. If the controller supports S2 security, you will be prompted to enter the first 5 digits of the DSK to complete the authentication, known as the Pin Code.(You can check the DSK and QR code by removing the battery cover of the product or package box)
- To remove or exclude the GKBC-3100Z into a Z-Wave network
 1. Set the controller in exclusion mode.
 2. Open the battery cover of the indoor body and press the [REG] button.
 3. Press the Master Pin [1][2][3][4] (Default value) button after pressing the [#] button.
 4. Press the [9][9] button after pressing the [#] button.

SmartStart

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 StartStart product will be added automatically within 10 minutes of being switched on in the network vicinity.

(You can check the DSK and QR code by removing the battery cover of the product or package box)

Factory Reset

Please proceed with the door lock open.

Please use this procedure only when the primary controller is missing or otherwise inoperable.

- To Factory Reset

1. Open the battery cover of the indoor body and press the [REG] button.
2. Press the Master Pin [1][2][3][4] (Default value) button after pressing the [#] button.
3. Press the [7][7] button after pressing the [#] button.

Battery Information

- 4 AA Alkaline 1.5V Batteries(6V)

Supported Command Class

Command Class	Version	Not added	Non-Secure added	Securely added	
				Non-secure CC	Secure CC
Z-Wave PLUS INFO	2	Support	Support	Support	
TRANSPORT SERVICE	2	Support	Support	Support	
SECURITY 0	1	Support	Support	Support	
SECURITY 2	2	Support	Support	Support	
ASSOCIATION	2				Support
ASSOCIATION GRP INFO	3				Support
BATTERY	1				Support
DEVICE RESET LOCALLY	1				Support
DOOR LOCK	4				Support
FIRMWARE UPDATE MD	5				Support
MANUFACTURE SPECIFIC	2				Support
NOTOFICATION	8				Support
POWERLEVEL	1				Support
SUPERVISION	1				Support
USER CODE	2				Support
VERSION	2				Support
INDICATOR	3				Support
CONFIGURATION	3				Support

Association(V2) & Association Group Information(V1)

- The product supports one association groups:

-> Group 1 is the Lifeline group. It can contain up to 5 nodes. The Lifeline group on this lock is used to report door lock operation report, and device reset locally notifications to nodes on the group list.

Battery CC(V1)

The Battery Get request can be used to get the status of the battery.

When battery level is low a battery warning is sent to the controller.

Door Lock(V4)

- Door Lock Operation is used to lock and unlock this product.

1) To Lock : Sending command class = COMMAND_CLASS_DOOR_LOCK, command = DOOR_LOCK_OPERATION_SET, mode = 0xFF (DOOR_SECURED) or BASIC_SET value 0xFF will lock the door. Notification Type Access Control, Event 0x03 (RF lock operation) is sent to the Lifeline and then one second later, a Door Lock Operation Report is sent to the Lifeline.

2) To Unlock: Sending command class = COMMAND_CLASS_DOOR_LOCK, command = DOOR_LOCK_OPERATION_SET, mode = 0x00 (DOOR_UNSECURED) or BASIC_SET value 0x00 will unlock the door. Notification Type Access Control, Event 0x04 (RF unlock operation) is sent to the Lifeline and then one second later, a Door Lock Operation Report is sent to the Lifeline.

- See table to see how the Door Lock Mode parameter affects the lock.

	Secured	Unsecured
Door Lock Mode	0xFF	0x00

In a Door Lock Operation Report the GKBC-3100Z will report.

Door Status		Unlocked	Locked
Door Lock Mode		0x00	0xFF
Handles		0x00	0x00
Door Condition	Bit 0 : Door	0 : Open, 1 : Close	
	Bit 1 : Deadbolt	0 : Locked, 1 : Unlocked	
Lock Timeout Minutes		0xFE	
Lock Timeout Seconds		0xFE	

Firmware Update Meta Data(V5)

The GKBC-3100Z supports firmware update of the Z-Wave module over the air.

The firmware upgrade takes ~20 min with S0 and ~20 min with S2

Firmware ID = 0x0102.

Firmware 0 ID = 0x0101.

Manufacture Specific(V2)

	Value	Comment
Manufacturer ID	0x037B	KeyWe Inc.
Product Type ID	0x0010	GKDL-5100Z(KR Region Only)
	0x0011	GKDL-5100Z(Other All Regions)
	0x0012	GKDL-5000Z(All Regions)
Product ID	0x0001	DoorLockKeyPad

Notification(V8)

The Notification CC is implemented as a push only, which means only pushes notification to the controller.

Sequence number is not supported.

Notification Type	Supported notifications		
	Event	State Parameters	Comments
Access Control (0x06)	0x01		Manual lock operation (Knob, Key, Button).
	0x02		Manual unlock operation (Knob, Key, Button).
	0x03	0x01 : Z-Wave 0x02 : BLE	RF lock operation (Z-Wave, Bluetooth, Remote controller)
	0x04	0x01 : Z-Wave 0x02 : BLE 0x03 : Remote Controller	RF unlock operation (Z-Wave, Bluetooth, Remote controller)
	0x05		User Keypad lock operation
	0x06	MASTER : 0x00 USER : 0x01 ~ 0x64	User Keypad unlock operation
	0x09		Auto lock locked operation
	0x0B		Lock jammed.
	0x0C		All user codes deleted.
	0x0D	MASTER : 0x00 USER : 0x01 ~ 0x64	Single user code deleted
	0x0E	MASTER : 0x00 USER : 0x01 ~ 0x64	New user code added.
	0x0F	MASTER : 0x00 USER : 0x01 ~ 0x64	New user code not added due to duplicated code.
Emergency Alarm (0x0A)	0x01		Contact police
	0x02		Contact fire service

Power Level(V1)

Can be used under inclusion to test signal strength from the controller and to the device.

Security(V1)

See Z-Wave documentation.

Security(V2)

This product support S2_ACCESS security class.

Supervision(V1)

See Z-Wave documentation.

Transport Service(V2)

See Z-Wave documentation.

User Code(V2)

Lock will accept maximum 100 pin codes that has 4-10 digits in length.

- Support Users : 100
- ID Range : 1 ~ 100

Version(V2)

This command Class is used to get information about which version of the different command classes the GKBC-3100Z supports and the software version of the GKBC-3100Z.

Version Report	
Z-Wave Library Type	ZW_LIB_SLAVE_ENHANCED(0x03)
Z-Wave Protocol Version	0x07 (SDK v7.12.02)
Z-Wave Protocol Sub Version	0x0C (SDK v7.12.02)

1) Firmware 0 Version

Version of the firmware on the Z-Wave module

Version	Subversion	Comments
1	0	First Release

2) Firmware 1 Version

Version of the firmware on the Host

Version	Subversion	Comments
1	0	First Release

3) Hardware Version

0x01	GKDL-5000Z, GKDL-5100Z
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Z-Wave Plus Info(V2)

Z-WAVE Plus Info	
Role Type	0x07 ROLE_TYPE_SLAVE_SLEEPING_LISTENING
Node Type	0x00 NODE_TYPE_ZWAVEPLUS_NODE
Icon Type	0x0300 ICON_TYPE_GENERIC_DOOR_LOCK_KEYPAD
User Icon Type	0x0300 ICON_TYPE_GENERIC_DOOR_LOCK_KEYPAD

Product Wake up

To wake up the product, the following actions are required.

1. Touch the keypad on outdoor body.
2. Push the button on Indoor body.
3. Turn the knob on Indoor body.

Configuration Parameters

Parameter 1:

Name : VOLUME
Description : It means door lock's volume
Default : 0x02 (Normal)
Min : 0x01
Max : 0x03

Parameter 2:

Name : DOOR LOCK MODE
Description : It means door lock's locking mode(auto/manual)
Default : 0x01 (auto)
Min : 0x01
Max : 0x02

Parameter 3:

Name : RE-LOCK TIME
Description : It means door lock's re-lock time
Default : 0x07 (7 seconds)
Min : 0x01
Max : 0x1E