LOCKLY GUARD™

DUO (679D) | Interconnected Smart Lock
Z-Wave Edition

Z-Wave Technical Manual

LOCKLY PRO™ www.LocklyPRO.com

V0.04 EN 25-06-25

Content

1. Supported Command Classes P.1
2. Add for Inclusion P.2
3. Remove for Exclusion P.3
4. Lock Factory Reset P.3
5. Command Class Notification P.4
6. Instruction Parameter P.5
7. Manufacturer Parameter P.5
8. User Codes P.6
9. Door Lock Operation Report P.6
10. Door Lock Logging P.7
11. Battery Level Report P.7
12. Command Class Indicator P.7
13. Command Class Basic P.8
14. Association Command Class P.8
15. Fingerprint Parameter P.9
16. SmartStart P.9

Introduction

This product is a security-enabled Z-Wave Plus® device that uses encrypted messages to communicate with other Z-Wave Plus products. To fully utilize its features, a security-enabled Z-Wave® controller is required.

It can work with any Z-Wave network and is compatible with certified devices from other manufacturers. All mains-operated devices in the network will act as repeaters to improve reliability.

Z-Wave operates as a wireless mesh network, and performance may vary based on building construction and communication paths. To ensure interoperability, each Z-Wave product must pass strict tests to meet the Z-Wave standard. The Z-Wave identity mark guarantees that products will work reliably with any other Z-Wave device.

The lock's Z-Wave module needs to be used with a security-enabled Z-Wave controller to unlock its full capabilities. Other devices in the Z-Wave network can act as repeaters.

1. Supported Command Classes

	COMMAND CLASS	NONSECURE	S2 ACCESS	VER
1	COMMAND_CLASS_ZWAVEPLUS_INFO	•		2
2	COMMAND_CLASS_SUPERVISION	•		1
3	COMMAND_CLASS_TRANSPORT_SERVICE	•		2
4	COMMAND_CLASS_SECURITY	•		1
5	COMMAND_CLASS_SECURITY_2	•		1
6	COMMAND_CLASS_VERSION		•	3
7	COMMAND_CLASS_MANUFACTURER_SPECIFIC		•	2
8	COMMAND_CLASS_DEVICE_RESET_LOCALLY		•	1
9	COMMAND_CLASS_POWERLEVEL		•	1
10	COMMAND_CLASS_BATTERY		•	1
11	COMMAND_CLASS_DOOR_LOCK		•	4
12	COMMAND_CLASS_USER_CODE		•	1
13	COMMAND_CLASS_DOOR_LOCK_LOGGING		•	1
14	COMMAND_CLASS_ASSOCIATION		•	2
15	COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION		•	3
16	COMMAND_CLASS_ASSOCIATION_GRP_INFO		•	1
17	COMMAND_CLASS_FIRMWARE_UPDATE_MD		•	5
18	COMMAND_CLASS_NOTIFICATION		•	8
19	COMMAND_CLASS_INDICATOR		•	3
20	COMMAND_CLASS_BASIC		•	2
21	COMMAND_CLASS_CONFIGURATION		•	4
22	COMMAND_CLASS_TIME		•	2
23	COMMAND_CLASS_TIME_PARAMETERS		•	1

2. Add for Inclusion

1. Bring the door lock within direct range of your controller.
2. Carefully remove the battery compartment cover.
3. Put your Z-Wave controller into inclusion mode.
4. Press the program button three times to enter pairing Z-Wave mode, at which point the lock screen indicator flashes green.
5. The door lock will appear on your controller's device list, allowing you to change its name as desired.
6. After setup is complete, either press the program button once briefly or wait 2 minutes to automatically exit the device pairing mode.

1. The door lock cannot enter inclusion mode again without a reset.
2. The DSK code must be entered during the inclusion process.

3. Remove for Exclusion

1. Ensure the door lock is powered on and within range of your Z-Wave gateway.
2. Activate exclusion mode on your Z-Wave controller.
3. Press the program button three times to enter deleting Z-Wave mode, at which point the lock screen indicator flashes green.
4. The door lock will disappear from your device list.
5. After setup is complete, either press the program button once briefly or wait 2 minutes to automatically exit the device deletion mode.

Notes:

1) If the first attempt fails, repeat the steps carefully.
2) The door lock cannot be excluded if it hasn't been included first.

4. Lock Factory Reset

If your network's primary controller is missing or not working, you may need to reset the door lock to factory settings manually. Ensure the door lock is not synced to a smartphone, then press and hold the reset button for at least 3 seconds to reset both the door lock and the Z-Wave module. You can also reset while syncing with a smartphone.

During the factory reset, the Z-Wave module will send the following to the Smart Home Controller:

Group: "Lifeline Group"
Instruction: DEVICE_RESET_LOCALLY_NOTIFICATION
Note: All activity logs and custom settings from the Z-Wave controller will be erased. Use the local factory reset only if the primary controller is missing or not functioning.

5. Command Class Notification V4

The Command Class Notification is used to report the status of the lock. The table below outlines the events and their corresponding statuses:

Notification Type	Event	Event Parameter
Access Control(06)	Manual Lock Operation(0x01)	
	Manual Unlock Operation(0x02)	
	RF Lock Operation(0x03)	
	RF Unlock Operation(0x04)	
	Keypad Lock Operation(0x05)	
	Keypad Unlock Operation(0x06)	User ID
	Auto Lock Locked Operation(0x09)	
	All user codes deleted(0x0C)	
	Single user code deleted(0x0D)	
	New user code added(0x0E)	
Power Management(08)	Power has been applied(0x01)	
	Replace battery soon(0x0A)	
	Replace battery now(0x0B)	

Note:

1. Fingerprints, RFID cards, Welcome Mode, and user passwords added through the Lockly Manager app will push an event when used for unlocking: **Manual Unlock Operation(0x02)**.
   When remote unlocking is performed through the Lockly Manager app, it will Notification an event: **RF Unlock Operation(0x04)**.

2. The auto-lock feature of the Lockly Smart Lock is turned off by default. You can customize the auto-lock timer using the DOOR_LOCK_CONFIGURATION_SET directive.

6. Instruction Parameter

The lock supports one association group with up to five devices. This group sends an unsolicited command to the designated devices when an event is triggered, and the command parameters can be dynamic. Group 1 for as the “Lifeline Group”, Supported command classes:
BATTERY_REPORT
DOOR_LOCK_OPERATION_REPORT
DEVICE_RESET_LOCALLY_NOTIFICATION
INDICATOR_REPORT
NOTIFICATION_REPORT
USER_CODE_REPORT

7. Manufacturer Parameter

The Lock supports the Manufacturer Specific Command Class with the following parameters:
MANUFACTURER_SPECIFIC_V2

Name	Value	Description
Manufacture ID	0x043D	PIN Genie DoorLock
Product Type ID	0x03	PRODUCT_TYPE_ID_ZWAVE_PLUS
Product ID	0x0076	PRODUCT_ID_DoorLockKeyPad

8. User Codes

The lock supports the User Code Command Class Version 1 with the following parameters. The User ID Status is defined as follows:

Parameter	Value	Description
User ID Status	0x00	Available (Not set) When user code is deleted
	0x01	Occupied When user code is registered
	0xFE	Status not available When user code is all deleted

The supported User number of 0 indicates that there are no supported users. You can add and support up to 20 Access Codes, with each Access Code being 4 to 10 digits long.

9. Door Lock Operation Report

The door lock supports an auto-locking timer that can be activated after unlocking via an access code, key, fingerprint, or thumbturn. This can be configured using the DOOR_LOCK_CONFIGURATION_SET parameter.

To set the door lock operation, use the DOOR_LOCK_OPERATION_SET instruction with the following options:

Door Unsecured: 0x00
Door Unsecured with timeout: 0x01
Door Secured: 0xFF

Additionally, the door lock operation report will always activate when there is a change in the door lock status.

10. Door Lock Logging

The following event types are supported by the smart door lock:

Event Type & Description
2 Unlock Command: Keypad access code verified unlock command
7 Keypad illegal access code entered
14 Lock Command: Z-Wave (no code)
15 Unlock Command: Z-Wave (no code)
30 Low battery

11. Battery Level Report

When a user requests the current battery level on the Lock, Z-Wave responds with a Battery Level Report. If the battery is low, it will report this using the same command. Additionally, the Lockly logo on the interior panel will flash red to alert users that the battery is low.

Parameter	Value	Description
Battery Level	0x00-0x64	Battery Level (0 ~ 100 %)
	0xFF	Indicates low battery warning

If the battery level falls below a certain threshold, a low battery warning (0xFF) is issued. To request the Z-Wave Module's battery level report, use the range 0x00 to 0x64.

Note: There may be a short delay in the report after a door lock operation. To send battery level information, perform a locking or unlocking action; otherwise, the battery level will be displayed as 0.

12. Command Class Indicator

The Command Class Indicator supports Indicator ID 0x50 (Identify) and Property IDs 0x03, 0x04, and 0x05. Nodes use a visible LED for the identify function.

13. Command Class Basic

The Basic Command Class is mapped to the following table:

Basic Command	Mapped Command
Basic Set (Value)	Door Lock Operation Set (Door Lock Mode)
Basic Report (Current Value = 0x00)	Door Lock Operation Report (Door Lock Mode = 0x00)
Basic Report (Current Value = 0xFF)	Door Lock Operation Report (Door Lock Mode > 0x00)

14. Association Command Class

1. Grouping identifier:
   Lifeline Group

2. Maximum number of devices: 5

3. Description of Association Group Usage:
   Lifeline Group:
   COMMAND_CLASS_BATTERY, BATTERY_REPORT: Sent when the battery voltage is lower than 10% or when the battery needs replacement.

   COMMAND_CLASS_NOTIFICATION_V4,
   NOTIFICATION_REPORT_V4: Sent when the door lock is unlocked or locked.

   COMMAND_CLASS_DOOR_LOCK_V4,
   DOOR_LOCK_OPERATION_REPORT_V4: Sent when the door lock is unlocked or locked.

   COMMAND_CLASS_DEVICE_RESET_LOCALLY,
   DEVICE_RESET_LOCALLY_NOTIFICATION: Sent when the door lock is reset to factory settings.

   COMMAND_CLASS_USER_CODE, USER_CODE_REPORT:
   Sent when Access Codes are set.

   COMMAND_CLASS_INDICATOR_V3,
   INDICATOR_REPORT_V3: Sent when COMMAND_CLASS_INDICATOR is triggered.

15. Fingerprint Parameter

This command is used to control the activated or deactivated state of the fingerprint feature. When the fingerprint function is deactivated, all fingerprint access will be blocked, preventing any unauthorized entry.

Number	Name	Format/Size	Read Only	Altering	Advanced	MIN	MAX	Default	Value Description
01	Activated Or Deactivated Fp Module	1 byte unsigned integer	NO	NO	NO	0	1	0	0-Activated Fp Module 1-Deactivated Fp Module

16. SmartStart

SmartStart-enabled products can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product using a controller that supports SmartStart inclusion. No further action is required after scanning; the SmartStart product will be automatically added within 10 minutes of being powered on and within network range.

The QR Code and digits DSK can be found on welcome card inside the packaging, specifically on the flap of the top layer.