



poly-control

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# TD003 ZIGBEE MANUAL

0.1 – 2016-02-05



## Revision history

Revision	Date	Notes
0.0.1	2016-11-11	First version
0.0.2	2016-11-16	Second version
0.0.3	2016-11-30	3th version
0.0.4	2016-12-01	4th version added RF Operation Event Notification
0.0.5	2017-01-20	5 <sup>th</sup> version updated
0.0.6	2017-02-16	6 <sup>th</sup> version
0.0.7	2017-03-09	7 <sup>th</sup> version



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## Introduction

This is the first version of the Danalock V3 Zigbee lock.

The manufacturer ID for Poly-Control is 0x115C.

End Point(s): 0x01

Profile: Home Automation 0x0104

Device Type: HA Door Lock 0x000A

Binde table size: 12

Reporting Attribute table size: 12

## Commissioning

To commission to Danalock in to a network, push the button one time.

To remove the Zigbee lock from a network, push the button one time.

## Reporting

The lock supports reporting of attributes when the recipient is in the binding table.

## Supported Clusters

Server side	Client side
Mandatory	
Basic (0x00)	
Identify (0x03)	
Door lock (0x101)	
Optional	
Power Configuration (0x01)	Time (0x0A)
Alarms (0x09)	OTA (0x19)
Poll Control (0x20)	Diagnostics (0x0B05)
Diagnostics (0x0B05)	



## Basic Cluster 0x00

### Attributes

Attribute	Attr. ID	Default	Comments
ZCL Version	0x00	0x02	
Application version	0x01	0x01	
Stack Version	0x02	0x01	
Hardware version	0x03	See below	
Manufacturer name	0x04	“Danalock”	
Model identifier	0x05	“V3-BTZB”	
Date Code	0x06	Return productions data	
Power Source	0x07	0x03 (Battery)	
Cluster revision	0xFFFD	0x01	

#### Application version

0x01 First version

#### Stack Version

0x01 = EmberZNet PRO 5.8.1 GA

#### Hardware version

- Returns 0x02 = 101-029\_B1
- Returns 0x03 = 101-029\_C1
- Returns 0x04 = 101-029\_D1

### Commands:

Command	Commands
Reset to Factory Defaults Command	

#### Reset to Factory Defaults Command

On receipt of this command, the device resets all the attributes of all its clusters to their factory defaults.

Note that ZigBee networking functionality, bindings, groups, or other persistent data are not affected by this command.

## Power Configuration

### Commands

No supported commands.

### Attributes

Attribute	Attr. ID	Default	Reportable
Battery percentage remaining	0x21	-	x
Battery Size	0x31	0x08 (CR123A)	
Battery Quantity	0x33	0x04	
Battery alarm mask	0x35	0xFF	
Battery percentage min threshold	0x3A	0x0A (10)	
Battery percentage threshold 1	0x3B	0x1A (20)	



Battery percentage threshold 2	0x3C	0x1E (30)	
Battery percentage threshold 3	0x3D	0x28 (40)	
Battery alarm state	0x3E	0x00	
Cluster revision	0xFFFD	0x01	

### Battery percentage remaining

Specifies the remaining battery life as a half integer percentage of the full battery capacity (e.g., 34.5%, 45%, 68.5%, 90%) with a range between zero and 100%, with 0x00 = 0%, 0x64 = 50%, and 0xC8 = 100%. This is particularly suited for devices with rechargeable batteries.

The value 0xff indicates an invalid or unknown reading.

### Identify 0x0003

The danalock will flash the LED once every two seconds when it is in identify mode.

#### Commands

Command	Comments
Identify Command	Used to set the identify time
Identify Query Command	Used to get the identify time

#### Attributes

Attribute	Attr. ID	Default	Comments
Identify time	0x00	0x00	
Cluster revision	0xFFFD	0x01	

### Alarm 0x0009

#### Commands

ResetAlarm S->C 0x00

ResetAllAlarm S->C 0x01

#### Attributes

Attribute	Attr. ID	Default
Cluster revision	0xFFFD	0x01

### Time 0x000A

The time is used by the log table.

### Over the Air Bootloading 0x0019– Client

Image Type ID: 0x03

Firmware Version 0x01



## Commands

ImageNotify s->c 0x00

QueryNextImageResponse s->c 0x02

ImageBlockResponse s->c 0x5

UpgradeEndResponse s->c 0x07

QueryNextImage Request C->S 0x01

ImageBlockRequest C->S 0x03

UpgradeEndRequest C->S 0x06

## Attributes

Attribute	Attr. ID	Default
OTA Upgrade Server ID	0x00	
Offset(address) into the file	0x01	
OTA Current File Version	0x02	
OTA Current Zigbee Stack Version	0x03	0x0002 (ZigBee Pro)
Ota Downloaded File Version	0x04	
OTA Downloaded Zigbee Stack version	0x05	
OTA Upgrade Status	0x06	
Manufacturer ID	0x07	0x115C
Image Type ID	0x08	0x0003
Cluster revision	0xFFFD	0x01

## Poll control 0x0020 Server

### Commands

Checkin s->c 0x00

Checkinresponse c->s 0x00

FastpollStop c->s 0x01

SetLongPollInterval c->s 0x02

SetShortPollInterval c->s 0x03

### Attributes

Attribute	Attr. ID	Default
Check-in interval	0x00	0x00003840
Long poll interval	0x01	0x00000014
Short poll interval	0x02	0x0002
Fast poll timeout	0x03	0x000028
Cluster revision	0xFFFD	0x01



## Door lock 0x0101 - Server

### Attributes

Attribute	Attr. ID	Default
Lock state	0x00	
Lock type	0x01	Always returns 0x00 Dead bolt
Actuator enabled	0x02	Always returns 0x00
Num lock records supported	0x10	17918
Num total users Supported	0x11	0
Num PIN users supported	0x12	0
Num FRID users supported	0x13	0
Num weekday schedules supported	0x14	0
Num yearday schedules supported	0x15	0
Num holiday schedules supported	0x16	0
Enable logging	0x20	1
Zigbee security level	0x34	0
Alarm mask	0x40	0xFFFF
RF operation event mask	0x42	0xFFFF
Manual operation event mask	0x43	0xFFFF
Cluster revision	0xFFFD	0x01

#### Lock state

- Can return two values dependent on the lock state:
  - o 0x01 Locked
  - o 0x02 Unlocked

#### Actuator enabled

- Always returns 0x00 Disabled, because the motor will only run for a short time.

### Commands

LockDoorResponse s->c 0x00

UnlockDoorResponse s->c 0x01

LockDoor c->s 0x00

UnlockDoor c->s 0x01

GetLogRecord c->s 0x04

GetLogRecordResponse s->c 0x04

Operating Event Notification s->c 0x20

Event Source	Operation Event Code	Attribute Bitmask	Event Description
0x01	0x01	BIT(1)	Lock, source: RF
0x01	0x02	BIT(2)	Unlock, source: RF





0x02	0x01	BIT(1)	Lock, source: Manual
0x02	0x02	BIT(2)	Unlock, source: Manual
0x02	0x0A	BIT(6)	Auto lock, source: Manual

## Diagnostics 0x0B05

### Commands

### Attributes

Attribute	Attr. ID	Default
AverageMACRetryPerAPSMMessageSent	0x011B	
LastMessageLQI	0x011C	
LastMessageRSSI	0x011D	
Cluster revision	0xFFFD	0x01

## Controllers Action on Inclusion

Bind on Alarm Cluster

Bind on Power Configuration Cluster

Bind on Door Lock Cluster