

Z-595 iButton KEYS

RFID Electronic Furniture Lock

User Manual

1. OVERVIEW

Z-595 iButton KEYS electronic lock is an iButton (Dallas Touch Memory) contact keys reader, a keyboard and a controller powered by a 9 V (E / PP3) battery. One battery lasts ~20,000 openings or 2.5 years of stand-by mode. This lock has unique enclosure design and installation method that enable it to be mounted on any metallic or wooden furniture, and connected, all within 5 minutes.

Locking mechanism of Z-595 is the same size as CAM LOCK mechanical locks, which allows for Z-595 mounting into the opening already made for a CAM LOCK.

Compact, with support for single-user and multi-user modes, easy in installation, programming and servicing, this lock is a perfect Access Control solution for various storage places: work clothes lockers, mailboxes, office furniture, trade equipment.

Z-595 iButton KEYS lock supports two operational modes:

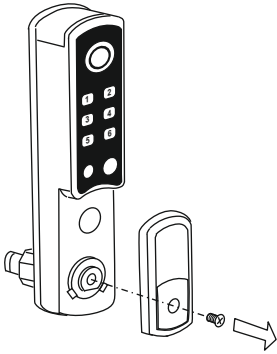
- Single-User Mode typical lock's controller operation: the lock can only be opened by keys or codes stored in its memory (up to 70).
- Multi-User Mode keys/codes not tied to single lockers, but can close/open any free locker.

2. SPECIFICATIONS

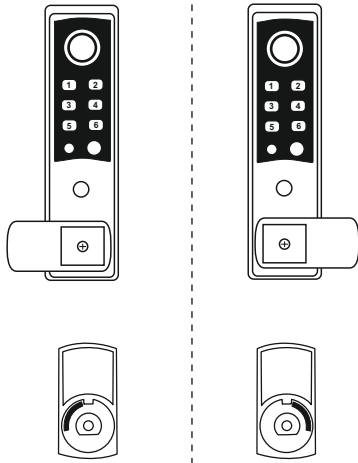
- Keys standards: iButton (DS1990, DS1996);
- Keyboard codes supported:YES;
- Normal keys/codes maximum number:70;
- Master keys maximum number:4;
- Power supply:one 9V PP3 battery;
- NVRAM:Present;
- Consumption current: $\leq 1\mu\text{A}$ (in standby mode);
- Audio-visual status indication:buzzer, bicoloured LED;
- Operating temperature:+5...+40°C
- Case materials:silumin, steel, ABS plastic;
- Colour:silver;
- Dimensions, mm:145 x 37 x 27;
- Mounting: screws and nut.

3. MOUNTING

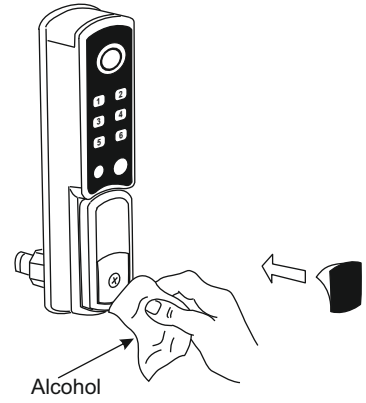
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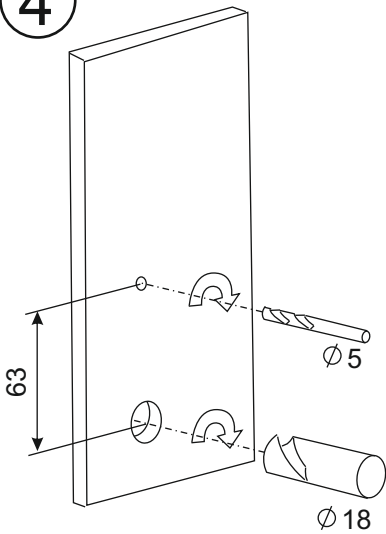
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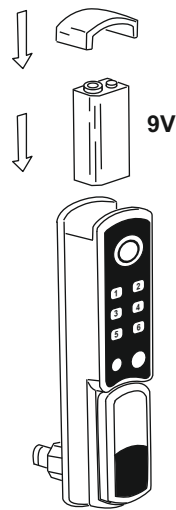
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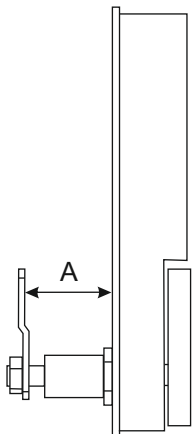
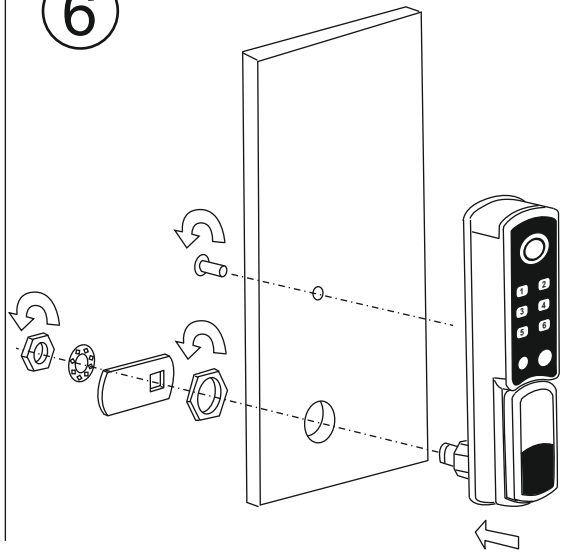
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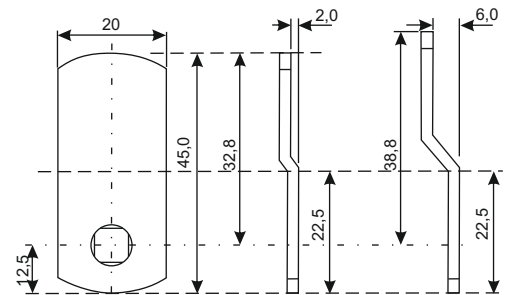
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6



| | | | | |
|--------|----|----|----|----|
| | | | | |
| A (mm) | 34 | 30 | 26 | 20 |



4. PROGRAMMING

In its factory state, Z-595 is in the Installer mode: its handle turns freely, no Master or Normal keys present in its memory, its keyboard enabled.

4.1. Initial power-up, Master keys creation

To create Master keys, the lock must be in its initial power-up state (its memory having no keys stored). Minding the correct polarity, install a 9V PP3 battery into lock's battery compartment. When powered up, the lock is issuing short beeps and blinking the red LED for 16 s. This indicates that lock's memory is empty and it is ready to create Master key(s).

With the beeps still sounding (within 16 s), approach the reader with a key; it then gets stored in lock's memory as a Master key. Short beeps stopping indicate that the first Master key has been successfully stored. To add more Master keys (up to four in total), approach the reader, one by one, with the keys to be programmed for this lock. Each key approach is marked by a short beep and a green LED flash. The Add Master Keys mode ends automatically after 18 s since the last key touch, this change acknowledged by a series of five short beeps and a green LED flash.

If no keys were created Master, repeat the whole power-up sequence again. This Master key creation procedure can only be performed if the lock memory is currently empty. Subsequently, use the created at this stage Master key(s) for programming.

Note: A keypad code cannot serve as a Master key (only a physical key can).

| Programming with a Master Key | | |
|--|--------|--|
| 1. Add Normal Keys/Codes | 1T | LEGEND: 1...5 – Number of Touches; T – long touch (hold key for ~6 s) t – short touch (hold key for ~1 s) |
| 2. Erase Normal Keys/Codes | 2t, 1T | |
| 3. Switch between Single-User and Multi-User Modes | 3t, 1T | |
| 4. Enable/Disable Keyboard | 4t, 1T | |
| 5. Add Master Keys | 5t, 1T | |

Each probe touch with a Master key is counted by the lock, issuing the number of short beeps equal to the touch number.

4.2. Add Normal Keys/Codes (1T)

Touch and hold a Master key to the reader (long touch). On touch, there is a short beep; keep holding the key at the reader for ≥ 5 s. At 5 s mark, you hear a long beep; you can now take away the Master key.

- **Adding Keys:** Touch the reader by DS1990 Normal keys, one by one, with intervals ≤ 15 s. Each touch produces a long beep and a green LED flash, acknowledging that this key was stored. If the key was already present in memory, it is denoted by two short beeps and a red LED flash.

- **Adding Codes:** Enter the code digits (three to five) on the keypad, with ≤ 15 s between the digits. After the last digit is in, touch the probe shortly with a Master key a short beep will acknowledge that the code has been stored. If this code is already in the memory, the lock responds with two short beeps and a red LED flash.

This mode automatically ends after 15 s since the last button touch, or a Master key touch. The lock acknowledges with one long and five short beeps.

4.3. Erase Normal Keys/Codes (2t, 1T)

Touch the reader by a Master key shortly twice; two beeps will sound, touch and hold the Master key for 5 s or longer, until a long beep sounds. Take away the Master key.

- **Erasing Keys:** Touch the probe by keys to erase, one by one, with intervals ≤ 15 s. Each touch is accompanied by a long beep and a green LED flash, confirming that the key was erased; if the key is already not present in memory, two short beeps and a red LED flash.
- **Erasing Codes:** Enter the code digits (three to five) on the keypad, with ≤ 15 s between the digits. After the last code digit is in, touch the probe shortly with a Master key a long beep will sound and the green LED will flash: the code is now erased; if the code is already not present in memory, two short beeps and a red LED flash.

The mode ends automatically after 15 s from the last button touch, or a Master key touch. The lock acknowledges with one long and five short beeps.

4.4. Switch Between Single-User and Multi-User Operational Modes (3t, 1T)

Touch the reader shortly by a Master key three times; three beeps will sound, touch and hold the Master key for 5 s or longer, until a long beep sounds. Take away the Master key.

One or two short beeps will sound:

- ONE: Single-User mode.
- TWO: Multi-User mode, with the key being erased; if the handle at this moment was in closed position, the handle remains turning freely.

Select the desired operational mode by pressing on the keypad:

- [1] : Single-User mode;
- [2] : Multi-User mode.

After each keypress, one or two beeps will sound.

The mode ends and the new setting is saved, automatically after 15 s after the last keypad button touch, or a Master key touch. The lock acknowledges with one long and five short beeps.

4.5. Keypad Enable/Disable (4t, 1T)

Touch the reader by a Master key shortly four times; four beeps will sound, touch and hold the Master key for 5 s or longer, until a long beep sounds. Take away the Master key.

Three or four short beeps will sound.

Select the desired keypad state by pressing on the keypad:

- [3] : Keypad Disabled (three short beeps)
- [4] : Keypad Enabled (four short beeps).

After each keypress, three or four beeps will sound.

The mode ends and the new setting is saved, automatically after 15 s after the last keypad button touch, or a Master key touch. The lock acknowledges with one long and five short beeps.

4.6. Add Master Keys (5t, 1T)

Touch the probe by the Master key five times, then touch and hold the Master key at the reader. In 5s you will hear a long beep. Take away the Master key. The green LED will start periodically blinking, indicating that you have entered the Add Master Keys mode. Touch the probe by keys with intervals ≤ 15 s between them. Each touch will be accompanied by a long beep and a green LED flash; if a key is already present in memory, two short beeps sound and the red LED flashes.

The mode ends automatically, after either the fourth key is added, or at 16 s after the last touch. The lock acknowledges with one long and five short beeps.

Note: Z-595 memory can hold up to four Master keys. A keypad code cannot be entered as a Master key.

5. SINGLE-USER MODE

5.1. Lock Opening/Closing

Touch the probe with a key.

- If the key is right, a short beep sounds and the green LED comes up. You now have 6 s to open or close the lock.
- If the key is wrong, a long trill sounds and the red LED comes up.

Note: If when opening or closing a lock, you hear a low intermittent tone, please wiggle its handle slightly, to help release the latch. If this did not help, either the lock could possibly have malfunctioned, or its battery is discharged.

6. MULTI-USER MODE

6.1. Closing lock by key

Touch the probe with a key, a long beep sounds and the green LED comes up. You now have 6 s to close the lock. If within 6 s the lock is not closed, the key will not be stored into memory, a long trill sounds and the red LED lights up, the handle will lock. The lock is ready for a new key.

6.2. Closing lock by code

Enter the code (3...5 digits) on the keypad, the green LED lights up, informing that the lock awaits for its handle to be closed. You now have 6 s to close the lock. If within 6 s the lock is not closed, the code will not be stored into memory, a long trill sounds and the red LED lights up, the handle will lock. The lock is ready for a new key.

6.3. Opening lock by key

Touch the probe with a key, a long beep sounds and the green LED lights up. You now have 6 s to open the lock. If within 6 s the lock is not opened, the key will not be erased from memory, a long trill sounds and the red LED lights up, the handle will lock.

6.4. Opening lock by code

Enter the previously entered code (3...5 digits) on the keypad, the green LED lights up, informing that the lock awaits for its handle to be opened. After the handle is turned, the LED goes off, the handle will lock, the code is erased from memory. The lock is ready for a new code.

6.5. Forced lock opening with user key/code preserved (inspection)

Touch the probe with a Master key. The lock opens. Now you have 10 s to turn the handle and open the locker. If the handle is reverted to closed position after 10 s, the key/code is preserved, and the handle will lock.

6.6. Forced lock opening with user key/code erased (takeover)

Touch the probe with a Master key. The lock opens. Now you have 10 s to turn the handle and open the locker. If the handle is NOT reverted to closed position after 10 s (thus left in open position), the key or code will be deleted and the handle will lock.

Note: If when opening or closing a lock, you hear a low intermittent tone, please wiggle its handle slightly, to help release the latch. If this did not help, either the lock could possibly have malfunctioned, or its battery is discharged.

7. RESET TO FACTORY DEFAULTS

- Disconnect the battery
- Press and hold the [1] button on the keypad.
- Now connect the battery at the same time.
- The red LED starts blinking, in 5 s it changes to solid red, and an intermittent tone will sound.
- Release the [1] button.

Now all stored Normal and Master keys were erased, and the Installer mode is active.

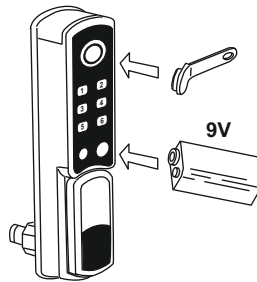
8. BATTERY DISCHARGE INDICATOR AND REPLACEMENT

One battery will suffice for 20,000 openings or ~2.5 years in stand-by mode. The lock monitors its battery state and informs the users when the battery needs replacement, as follows:

Lock battery is almost discharged.

If on touch with a Normal key to the lock, the LED is not blinking but the lock is still working, -- its battery has been almost discharged and needs to be replaced.

If you failed to replace the battery timely and the lock doesn't have enough energy to open the locker, apply external power through the dedicated terminals and then touch the key. See the picture.

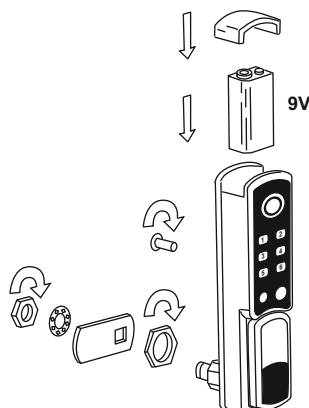


Lock battery is completely discharged.

If on touch with a Normal key to the lock, the LED is not blinking and the beeps aren't sounding its battery has been completely discharged.

Battery replacement.

The lock's electronics are provided with settings NVRAM, so that during the battery replacement, all settings and keys are preserved in controller's database. Replace the battery as indicated on the picture.



9. FIRMWARE UPDATE

The Z-595 iButton KEYS lock can update/replace its firmware from a DS1996 key. The firmware update takes 20 s. Just touch the reader with a DS1996 key containing firmware, and the update will start automatically.

10. PACKAGE CONTENTS

- Lock:1;
- Sticker for the handle:1;
- Different size latches:2;
- Applicator on the side wall (for chipboard lockers):1;
- Mounting kit:1;
- DS1990 key:2.

11. OPERATING CONDITIONS

Ambient temperature: +5...40°C.

Humidity: ≤ 98% at 25°C.

When operating under non-recommended conditions, device parameters can deviate from specified values.

The device must be operated in absence of: precipitation, direct sunlight, sand, dust, and moisture condensation.

12. LIMITED WARRANTY

This Device is covered by limited warranty for 24 months.

The warranty becomes void, if:

- this Manual's guidelines are not followed;
- the device has suffered physical damage;
- the device has visible traces of exposure to moist and/or aggressive chemicals;
- the device circuits have visible traces of tampering by unauthorised parties.

Under this warranty, the Manufacturer shall repair the device or replace any broken parts as required, free of charge, in cases where the fault is caused by a Manufacturer's defect.

14. CONTACTS

Authorized representative in the European Union:

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The symbol of crossed-through waste bin on wheels means that the product must be disposed of at a separate collection point. This also applies to the product and all accessories marked with this symbol. Products labeled as such must not be disposed of with normal household waste, but should be taken to a collection point for recycling electrical and electronic equipment. Recycling helps to reduce the consumption of raw materials, thus protecting the environment.

